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NATIONAL DYES

PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

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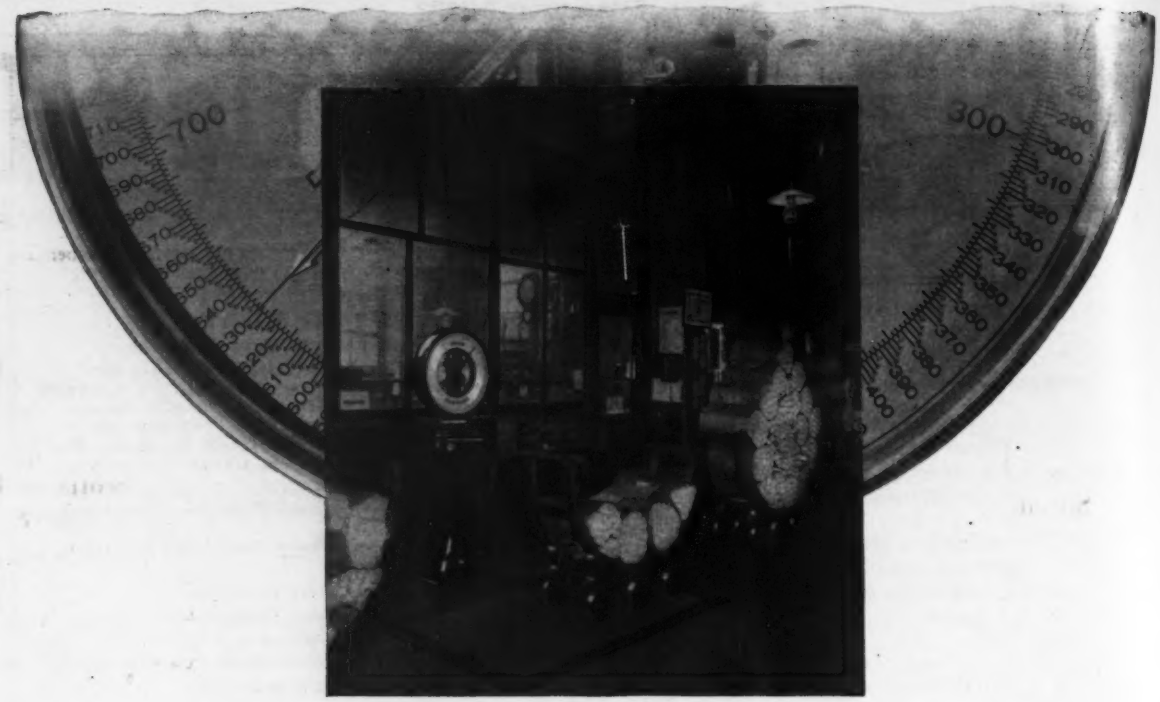

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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXI, No. 22 Thursday, November 26, 1925

The Magazine of the Paper Industry

Pulp and Paper Mills Progress Over the Border

International Paper Co.'s Ottawa River Developments Well Under Way—Various Duke-Price Projects Nearing Completion—Work on New Barnjum Pulp Mill in Nova Scotia to be Speeded Up—New Manitoba Pulp and Paper Mill Being Erected—Quebec Pulp & Paper Mills Deny Rumor of Merger With Port Alfred Pulp & Paper Corp.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 23, 1925.—The management of the Quebec Pulp and Paper Mills, Ltd., has issued a statement denying a report published in the press here to the effect that negotiations were under way to amalgamate with the Port Alfred Pulp and Paper Corporation. The Company's denial is as follows:

"Certain rumors have been circulated of late concerning alleged policies and actions of Quebec Pulp and Paper Mills, Ltd., with which are being merged the Saguenay Pulp and Power Company, Chicoutimi Pulp Company and their subsidiaries,—which in some instances have been communicated to the press. Time has proven so far that these rumors were unfounded and merely the product of an over fertile imagination, and the course followed by the companies interested in ignoring them in the past has been fully justified. Recent declarations from an apparent similar source, reporting that negotiations are current between the Quebec Pulp and Paper Mills, Ltd., and Port Alfred Pulp and Paper Corporation for the purpose of merging these companies together, would call for the same indifferent disregard were it not fully apparent that this last information constitutes, on the part of its anonymous author, a deliberate attempt to mislead public opinion and possible interested parties. The linking up of the name of Price Brothers & Co., to this fairy tale constitutes a clumsy camouflage of the author's real intention."

The Lumber Cut—Bigger or Smaller?

With the advance estimates of the 1925-26 cut of timber placed at the record figure of 1,500,000,000 feet by officials of the Provincial Department of Lands and Forests, indications are that the season will be one of the most active, in Quebec Province, at least, so far as pulp wood is concerned, for many years past. Reports received here show that already there are 3,500 lumber camps operated throughout the province, with the Lake St. John and Chicoutimi districts the center of greater activity. The figures given are interpreted as meaning that there is an increase of one-third over the average cutting cut in the last ten years, and some 250,000,000 feet more than what was estimated to be the average for the 1920-30 period.

On the other hand, David Champoux, president of the Canadian Lumbermen's Association, in discussing the above estimate, says that as far as the number of logs cut for lumber this year in Quebec, New Brunswick and Nova Scotia is concerned, there will be a 25 to 30 per cent reduction over the cut made last year. Mr. Champoux pointed out that the increase of one-third over the average cutting of the last ten years that was estimated for this year by the Department, was due to the greatly increased number of logs cut for pulpwood. "The Department's report might lead one to believe that the lumber business was thriving in this province," said Mr. Champoux. "As a matter of fact, this is not the case. The lumber industry here is in such a condition that the lumbermen of the East are meeting with the railways on Tuesday asking for a reduction in the present freight rates on lumber. The increase is to be found in the pulp wood industry."

New Town Likely on Ottawa River

At present almost 600 men are engaged on the preliminary work in connection with the erection by the International Paper Company of a power plant at Chelsea, Que., and a huge pulp and paper mill on the north shore of the Ottawa river two and a half miles from Gatineau Point. By spring, between 3,500 and 4,000 men will be at work rushing the mills to completion. Two branch line railways are being built to serve the company's new works. One, from the main line at Chelsea, to where the power house will be erected, and the other from the Montreal-Ottawa C. P. P. north shore line to the site of the paper mill. A new town will spring up on the banks of the Ottawa within two years, it is predicted. The proposed pulp and news print mills will employ from 400 to 500 men constantly and these men will live with their families near their work. Already the company has built several houses. Six large farms had been bought outright on the main road between Hull and Buckingham and about midway between Gatineau Point and East Templeton. Power lines and telephone lines have been laid into the new camp site and it is now a scene of great activity.

New York Financier Heads Duke-Price Co.

Succeeding the late J. B. Duke, and thus allowing the original huge power development plans in the Saguenay district to be carried out, G. C. Allen, a New York financier, closely connected with the tobacco king's activities, has been elected president of the Duke-Price Company, it is announced by J. H. Price, vice-president of the company. The Isle Maligne section of the power-harnessing project will be completed by the middle of February, meaning that from that part of the Grande Decharge work, some 480,000 h.p. will be available. Delay had been encountered on portions of the work, due to the force of the current, which was sweeping before it all obstacles, including tons of rocks. Engineers have been able to deal with this unexpected difficulty and with the most modern installation, have succeeded in mastering the situation.

Illustrating the extent of the task facing the engineers is the fact that in the course of the present week in order to blow up some huge rocks which were preventing execution of the work, six carloads of dynamite, valued at $33,000, were used at one time, doing in a second work which would have taken years to carry on with other methods. While preliminary work has been carried

out at Chute a Caron already, where nearly 800,000 h.p. are to be developed, some of the work has been delayed until next spring, it was announced by Mr. Price. On the other hand, the model city of Arvida, where Premier Taschereau states 30,000 people would soon reside, is being rapidly erected. A group of engineers, having under them several thousand men, are rushing the construction work, and early next spring everything will be in readiness to lodge the workers. While there are a large number of foreign workmen employed at this stage, the population from this province will find ample employment in the aluminum factory as soon as it has been completed. Some of the sections of the factories will supply easy work under ideal conditions for females.

The Barnjum Mill in Nova Scotia

The plans for the new pulp mill which Frank J. D. Barnjum is to erect in Nova Scotia will be speeded up. Recently Mr. Barnjum acquired some property from the Canadian National Railways, which is to be included in the site of his new mill. Mr. Barnjum has been negotiating for some months for this property and it was impossible to carry out any plans for the projected mill until this had been acquired.

Manitoba Mill Under Way

Work is now under way on the 250-ton pulp and paper mill being erected by the Manitoba Pulp and Paper Company, Ltd., according to Col. H. C. L. Jones, vice-president of the Spanish River Pulp and Paper Company, which is behind the venture. The mill when completed, will be very similar to the one now owned by the latter company at Espanola, Ont., and the construction conditions on the two sites are also alike.

Whalen Company's Affairs

In refusing the application on behalf of the debenture holders for postponement of the judicial auction sale of the assets of the Whalen Pulp and Paper Company, for a further ninety days, Justice Gregory said: "I am sorry to do what I must do. A court of equity has the right to postpone enforcement of a mortgage, but the discretion is only exercised, when a mortgagee's rights are not prejudiced. It appears at first that the bondholders would get their money, were I to grant the application; and if I was satisfied that the bondholders would get their money, I would not hesitate. The debenture holders have come forward with a very nebulous suggestion. They must show that they have something substantial and tangible. It looked at first as if the Whalens and all these people were being hardly used, but that is not so. There are claims now against the company of $5,500,000 on bonds and for charges and expenses incurred; and there is the depreciation. I refuse the application." Justice Gregory added that, in any event, he held that the debenture holders had undertaken, when they obtained the last postponement of sale, not to apply for another adjournment.

At the end of October, the assets of the Whalen Pulp & Paper Co. were acquired by the bondholders. The company has been operated by a receiver for some considerable time. The bondholders acquired the assets for the sum of $4,000,000.

Installing New Kraft Digesters

CHICAGO, November 23, 1925.—The Minnesota and Ontario Paper Company, whose Chicago office is at 737 Conway Building, and whose mills are at International Falls, Minn., and St. Francis, Ont., announces that it is temporarily off the market. The company is installing new kraft digesters.

Colorado Forest Reserve Earnings

DENVER, Col., November 21, 1925.—Charles Davis, state auditor of Colorado, has apportioned $107,849.55 among the various counties of the state wherein there was a forest reserve area. This is their share of the earnings of the reserve for the year ending June 30, 1925. Gunnison county leads, with Saguache a close second, and Larimer third.

Envelope Manufacturers' Fall Meeting

The annual autumn gathering of envelope manufacturers took place at the Waldorf-Astoria, New York, on November 16 and 17, under the auspices of the Bureau of Envelope Manufacturers of America.

Morning and afternoon business sessions were held each day, carrying out an interesting and carefully planned program. The key note of the meeting was the concerted effort sponsored by the Bureau for the marketing of better business envelopes and for the most constructive selling methods.

New lights on the tremendous possibilities of business envelopes as an advertising medium were brought out. It was made evident that neither "Gyp" selling methods nor dumping are necessary if the envelope manufacturer and envelope merchants will cooperate with their business house customers in the design, production and use of the most effective mailing envelopes.

Features of the program were addresses by L. R. Watkins, Assistant General Purchasing Agent of the Western Electric Company, who discussed "Some Essentials of Envelope Merchandising from the Consumer's Standpoint"; George Heintzman, Marketing Counsellor of the Dexter Folder Company, and of the West Virginia Pulp and Paper Company, and Consultant with the Committee on Marketing of the U. T. A., who talked on "Some Experiences in Developing a Marketing Service"; and H. R. Robinson, of the Postage Meter Company, speaking on "The Envelope in Relation to Power Driven Mailing Equipment."

New members of the Bureau whose applications were approved at this meeting were: The Murray Paper Products Company, 4201 Belmont Avenue, Chicago; The Brown Paper Goods Company, 901 West Lake street, Chicago; and the Centralia Envelope Company, Centralia, Ill.

The proposed universal weight and count basis for paper specifications, namely 25 x 40—1000 sheets, was thoroughly discussed, but there was no final action. Steps will be taken, however, to secure representation for the envelope manufacturers on the Committee on Simplification of Paper Sizes of the Bureau of Standards. Contact will also be maintained with the National Paper Trade Association and with the American Pulp and Paper Association on this question.

A "live" exhibit of actual envelope manufacturing processes may be installed at the Sesqui-Centennial International Exposition, Philadelphia, in 1926. A committee was appointed to make the necessary arrangements, subject to a referendum which will be conducted for approval of financial arrangements. It appears that the expense of such an exhibit will be negligible, with cooperation assured from machine manufacturers as well as from many envelope manufacturers.

The Informal Family Dinner occurred Monday evening in the Waldorf Banquet Hall, where over sixty members and guests were served. "Dusky" Miller entertained with his series of "Explosions."

President Reineman (Buffalo Envelope Company, Buffalo) announced that the Executive Committee have scheduled the next meeting of the Bureau to be held in Chicago in late January, 1926. Announcement of the actual date and place will be made later by C. R. Stevenson, Secretary-Treasurer, from the national headquarters of the Bureau, at 10 West 44th street, New York.

Fireman Injured at Perkin's Plant

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 23, 1925.—Joseph Mercier, a fireman in the plant of the B. F. Perkins & Son factory, makers of paper mill machinery, was severely burned and scalded last week when some sort of back draft or explosion occurred. The big door to the boiler room was blown down either by the explosion or the concussion, the water column broken and some minor damage done. The cause has not yet been ascertained. The property damage however was not severe and the plant was able to operate today as usual.

Paper Demand in Philadelphia Falling Away

Mercantile Industries Have Already Stocked Extensively for the Holidays—Compared to Last Year, Market Conditions are Vastly Improved—Advance Requirements for Fine Papers Keep Shipping Departments Active—Coarse Paper Purchases Curtailed

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 23, 1925.—Having stocked extensively for the holidays, within the past few weeks, the mercantile industries of the Quaker City have been slowing up on their purchases of papers and except for a few specialties moving in small quantities there was a decidedly quieter trend in this class of trade. Of course the paper distribution trade is still enjoying a vastly improved market over the same period of last year and although the volume of orders is not as heavy as it was during the past month or so, conditions are such as to warrant a continuance of present healthier business attitude for the remainder of the year. Manufacturers are not in the market for bulk orders at this time because of the close proximity of the inventory season preferring to hold off their orders until after recording of stocks on hand and are buying only for the moment's needs. This applies to both fine and coarse paper generally, with the exception of a few specialized lines in the former which have an especially active advance holiday market.

Holiday Demands Hold Fine Paper Market

Greeting card stocks, announcements and a few highly specialized grades of fine papers such as those used in the inventory season for the recording of business accounting and like purposes, just now are the most active of the merchandise classified under this heading. The advance holiday requirements of specialties in this line keep the shipping departments active for many grades of seasonally active papers. Otherwise, the fine paper division is holding to a spotty distribution for the standard stocks of year round usage. Book papers, as has ruled the past few months, still continue the most active of the standard grades of papers consumed by the printing and publishing trades. Printers and publishers have been confused within recent weeks over the introduction of numerous and conflicting price quotations for their paper supplies and have been protesting to the paper trade against the lack of uniformity in the price situation and their bewilderment over lack of standardized values which heretofore have dominated the Philadelphia trade, stabilizing the market. This protest was voiced at a recent meeting of the Philadelphia Paper Trade Association by the master printer organization when the question of credits to the printing trade was discussed by members of the Typothetae for the promotion of more stringent credits on papers and the prevention of heavy losses to both printers and paper men, through failures in the printing industry.

Curtailed Buying In Coarse Papers

The purchases of coarse papers in the mercantile field have been curtailed within the past few days due to the completion of holiday stocking of wrappings and other grades adapted for gift containers. Previous to the curtailment of orders there were numerous purchases of krafts and tissues in volume. Now that the merchants have been well supplied with their holiday requirements in paper the trading has drifted into quieter channels and the needs of the consumer are now confined to hand to mouth supplies of specialties. Here, too, the manufacturers are awaiting the passage of the inventory period before stocking for future needs. Clothing dealers and manufacturers have been buying freely of the tissue grades developing a steadier market for these flimsy stocks. Knit goods manufacturers are now among the buyers on more extensive scale. There is very little buying among the textile industries at this time although these manufacturers have been among the consumers of paper on a larger scale for the past few months. Screenings are in fair demand some of the better grades having been advanced half a cent per pound within recent days. Waterproof papers are also among the active stocks quotations holding firmly to the advance price of a month ago when there was a rise in values of half a cent.

Paper Stocks Marking Time

Awaiting the return of paper mills to the purchasing side of the paper stock market, the local wholesale raw material dealers are marking time with very little demand for the better grades of materials and only a fair business in the common grades. It is expected that this condition will prevail until after the first of the year, when the mills announce that they will most likely again become purchasers of all lines of paper and rag stocks. Dealers are not inclined to feel any apprehension over the manufacturing situation after the first of the year, as the mills are promising to place orders at that time. Prices still hold to the levels of a month ago when there was a more active demand, with no overstocking in any branch of the stock business.

Dealers to Hear Vice President Mallalieux

Having postponed the customary semi-monthly meeting which was to have been held last Thursday the Coarse Paper Dealers affiliated with the Philadelphia Association will be honored at a special gathering to take place on Monday of this week by the presence of Vice President J. C. Mallalieux, of the National Paper Trade Association, and member of the firm of George W. Millar & Co., New York, who is to address the members. In order that all might be able to hear the executive of the National organization the meeting was postponed until an announcement had been sent to the members so that they might plan to be present. Vice President Mallalieux will talk on Association work and on the important topic of what may be expected for the industry in the new year. More than thirty members are expected to attend, this representing the full quota of the Coarse Paper Division.

To Celebrate 75th Birthday Anniversary

When the merry holiday month is at hand there will be a dual celebration included within its days for the veteran head of the Garrett-Buchanan Company, John H. Sinex, who will be given an anniversary celebration commemorating his 75th year of journey through life. Though three quarters of a century have marked his progress he still enjoys the best of health and ability to personally supervise the activities of one of the largest paper distribution businesses in this section, occupying space in the building extending almost an entire city square, and the most prominent of central city warehouses in point of structure. His birthday anniversary, which takes place on December 7, will be celebrated by the 180 employees and executives of the Garrett-Buchanan Company with but one outsider participating, viz., E. J. Cattell, former City Statistician, and head of the Convention Bureau of the Philadelphia Chamber of Commerce, who was a boyhood chum of President Sinex. There will be a reception and luncheon held at headquarters in honor of the occasion and the entire Saturday afternoon on December 5 will be given over to feasting, entertainment and the exchange of greetings among the employees and officers for their associate of so many years of happy business contact.

Paper Men at Stationers' Testimonial

Among the attendants at the testimonial dinner given last Thursday in honor of retiring President Frank R. Welsh of the Philadelphia Stationers Association, at the Bellevue-Stratford Hotel,

were President Morgan H. Thomas of the Philadelphia Paper Trade Association, and its Secretary, Joseph H. Miller, representing the Garrett Buchanan Company; Ralph Keenan, of the Whiting Patterson Company, and A. M. Cohen, of the Charles J. Cohen Envelope Company.

Japan Paper Co. Adds Specialties

Several new lines of papers from the European and Oriental manufacturers have been stocked for the holidays by the Japan Paper Company, just removed to larger quarters in the Witherspoon Building. The local offices of the Japan Company, under the supervision of Warwick C. Miller, having outgrown the old quarters in Room 709 there has been taken over the larger suite on the 8th floor of the Witherspoon Building, occupying Rooms 806-807. Having settled in these quarters this week the Philadelphia Branch is displaying its new holiday specialties in French and Oriental wrappings with Christmas designs adapted for attractive gift wraps. There also are imported novelties for the present rage among householders of home lamp shade making. Among the holiday stocks also are greeting card and announcement stocks used by the printing, engraving and stationery trade for customers who require individuality in their personal greetings or social requirements and for those who desire to hand design and paint their own Christmas cards. These are in all colors and white and imported and can be purchased in bulk or in limited quantity. The new imported papeteries are shipped almost as rapidly as they come into headquarters, the demand for them at this season being urgent and far in excess of incoming shipments.

Pennsylvania Mill to Resume Operations

Word has been received by the trade here of the intended resumption of operations of the New Castle Paper Mill at New Castle, Pa., for the past year idle and closed to business, under the regime of the old proprietors. It was learned that new owners have taken over the property and are now preparing to enlarge the mechanical equipment and resume production on a more extensive scale with a large amount of capital to be invested in the new venture. The New Castle Mill formerly produced medium weight wrappings and jute papers for bag manufacture, and flour sacks, with a capacity eight tons per day. It is located in Lawrence County, near New Castle, Pa. Its mechanical equipment at the time of closing consisted of a cylinder machine, six beating engines and two Jordan engines.

Satterthwaite-Cobaugh Co. Adds New Papers

The newest of lines to be added to the recently organized firm of Satterthwaite-Cobaugh Company stocks, are the Two Text Bonds. These papers will be permanently stocked at headquarters, 231 Chestnut street. They are in the combination coated and bond papers, with green on one side and white India on the other side, and made by the Standard Paper Manufacturing Company.

Jay and Em Paper Co. Organized

The Jay and Em Paper Company, 2602 N. 30th Street, has been added to the list of Philadelphia coarse paper dealers. The proprietors are Jacob and Moses Von, who will carry a complete line of coarse grades and specialties.

Judd Paper Co. Removes Offices

The Quaker City Branch of the Judd Paper Company has been removed from South 4th street to the Flanders Building, 15th and Walnut streets. The new quarters are located in Room 708, and are under the management of Edward Battersby.

Franklin Paper Plans New Leather Substitutes

New substitutes for leather in paper specialties are to be brought out in the new year, according to announcement made by H. R. Hillegas, of the Franklin Paper Company, whose Philadelphia headquarters are located at 810 Sansom street. The new products are being produced at the Camden laboratories of the Franklin Company and will supplement the numerous other leather substitutes which the firm has been producing for the past few years. So extensive has become the line of leather substitutes made by this firm that there is hardly a real leather grain that has not been reproduced in exact replica in a paper product with all the strength, durability and even greater wearing qualities than the real articles in the skin. Trunk and baggage manufacturers, book binders, novelty manufacturers, suit case makers and others formerly using leather are now substituting the paper grains for the coverings or linings of their products and the Franklin company is enjoying an international patronage for its own specialties in this line, producing anything in this line to order if it already is not included among its standard stocks.

An Enterprising Organization

The C. B. Daring Manufacturing Company, of Bridgeport, Montgomery County, Pa., manufacturers of Valley Forge Bristol and Chocolate Layer Board, are the successors of the Amboy Paper Company. The new organization has made many improvements in the plant, are making a better grade of board, and have placed a new shade of chocolate board on the market.

The C. B. Daring Paper Manufacturing Company has installed a slitting and rewinding machine, and flat-bed cutter and can furnish rolls from 1 inch up in width, and cut sheets into small sizes. The trim of their machine is 72 inches. Odd sizes can be furnished on inquiry.

De Jonge Co. Preparing New Box Makers Samples

New samples of the 1926 box makers papers are now being prepared by the local offices of the Louis De Jonge Company, under Manager Walter V. Doscher. These will be sent out the first of the year. They consist of fancy papers chiefly used by the box manufacturing industry.

Bureau of Standards Paper Tests

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—The Director of the Bureau of Standards has very little to say this year in his annual report in connection with the work of the paper laboratory of his bureau. Taking up the question of paper testing methods and apparatus and glue in paper making the Director says:

A study was made of the instruments used in determining the degree of sizing, the measurement of permeability, of finish, and of the flexibility of paper, and an extractor was developed for removing the carbon coating from carbon paper. The various tensile testers in use have been compared, and suggestions of minor changes in design, which it is believed will lead to more uniform results, have been made to the manufacturers.

An investigation was made of glue as a substitute for casein in making coated paper. This was carried out in the semi-commercial coating equipment of the bureau, and the paper obtained was tested commercially for printing quality. The results show that the technique required is practically the same as in using casein excepting the necessity of more close control of the temperature. No more glue is required than when casein is used. The coatings obtained are sufficiently waterproof for all paper except for high-grade lithograph work. The commercial fillers work just as well with glue as with casein, and apparently the former gives superior folding qualities.

Watson-Frye Co. Buy Union Iron Rights

The Watson-Frye Company, founders, machinists, and specialists in pulp and paper mill machinery, of Bath, Maine, have bought all the patterns, drawings and patent rights, from the Union Iron Works, of Bangor, Maine, on the Tidmarsh grinders, chippers, screens, wet machines, etc., and have appointed H. E. Tidmarsh, the well known designer and builder of pulp and paper mill machinery, general manager. The Union Iron Works is still in existence and at the present time is manufacturing tractor snow plows and other machinery.

MATHIESON Chemicals

Quality Is Paramount

WITH many of the raw materials going into the chemical-consuming industries, market fluctuations are wide and frequent. In such cases the question of price may readily assume in the mind of the buyer an importance out of all proportion to other vital considerations.

This undue emphasis on price may often extend even to those raw materials where market changes are infrequent and small, and where little may be gained by "shopping" for lower quotations. Thus, when the quality and uniformity of the product and the character of the manufacturer should be the prime considerations, price frequently becomes the principal deciding factor. Long-established brand names and records of service may be entirely disregarded for a negligible difference in price.

By rigidly adhering over many years to a uniformly high standard of manufacture, we have built up for our "Eagle Thistle" Brand products an enviable record for quality and uniformity, at the same time establishing a reputation for satisfactory service and equitable business dealings with the consumer. We believe that discriminating buyers are recognizing more than ever before that these are the first things to be considered in selecting a source of supply.

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Liquid Chlorine-Caustic Soda Bleaching Powder-Soda Ash

Demand for Paper in Chicago Becomes Active

Long Anticipated Autumn Business Comes in With a Rush—Mills and Plants on All Sides Report Steady Influx of Orders—General Improvement Affects Fine Paper Market Particularly—Coarse Paper Merchants Elated With Better Tendency

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 21, 1925.—There is a good feeling among Chicago paper men this week. The awaited "fall business" is now admitted to have already at last. A distant stimulation of business has sent the merchants to their desks and warehouses, scurrying about to catch up on the delivery of orders. Shipments have increased so fast that there is a little confusion on the paper market at the time of writing.

There has been nothing more encouraging that has happened during the year than this hoped for, expected, but tardy business. Somehow, this week has been the time for a revival of business throughout the city, and the optimism felt by paper men right along is no longer necessary. There is no time for it.

Prices, however, are the same as last week so far. According to the trend of the market, changes are due before another week is up. In the meantime, paper marchants are enjoying themselves to the utmost.

Mills and plants on all sides are reporting increased business, and a majority of the ones solicited report themselves behind on orders. Not distressingly behind, so that they will never be able to catch up, but if the rise in the market only continues at its present pitch, this condition will necessitate additions of employees at the mills.

The news comes from all sides. A paper merchant who was quoted some weeks ago as saying that there wasn't any fall business, and who has been conservative in all his statements, noted yesterday an improvement in the market, not only in his own company, which handles fine papers only, but in the whole field, coarse and fine. A representative of coated paper manufacturers is so far behind that the possibility of catching up on orders this year is hopeless. The plant of that company is working day and night, while an addition to the plant is being constructed.

Fine Paper Market Improvement

The increase in orders in the case of the fine paper market this week is especially noteworthy, because of the fact that this has not been one of the best markets for the past few weeks. Prices have remained at one solid basis for some time, and sales and shipments have not been what the merchants prepared for. This week has seen the first real rise in shipments of fine papers of all varieties, with no special grades at the head, unless it be book and printing papers. The general improvement has affected the fine paper market particularly for the above reasons, and while the coarse paper men have experienced an increase also, they have not expected it, like the fine paper men.

Coarse Papers Going Strong

This gives the coarse paper merchants of Chicago ample cause to be elated. Kraft paper sings and whirs. Prices are unchanged for the week, at least until Saturday noon.

Thus, all but the paper stock men have been for days sharing in unprecendented good business for the year. Reasons for the sudden advances have not been forthcoming. One merchant said that it was enough to take care of the business without thinking up reasons why it was here.

Miscellaneous Trade Notes

E. V. Fox, of the Tomahawk Kraft Paper Company returned this morning after a successful trip through the east.

The Peninsular Paper Company of Ypsilanti, Mich., is sending to the trade handsome advertisments of its Patrician Portfolio, colored yellow and white, with questions marks on the cover which arouse the curiosity. The interior reads:

That next booklet-catalogue-announcement-mailing paiece of yours—As you start your first rough dummy or layout for it, how often do one or more of these questions come to mind—followed by questions which arouse the curosity further: questions of motif, color, size, etc.

The Patrician Portfolio is named "Practical Suggestions on Motifs and Color Schemes for Covers, Announcements, Mailing pieces, neatly illustrated, and available without cost for whosoever is interested. It advertises, of course, the Patrician Cover paper of the above company.

Paper Stock Market

Nothing much new can be said for the paper stock market. Prices continue along the old lines, with a scarcity of kraft. The paper stock business is a hard one to make money out of in this city, but this is not hindering many of our business men from doing so.

The general paper market, however, it this week boosted by good reports, to the extent that everywhere there is excitement in the paper houses. A better report next wek of actual rsults is expected.

News Print From Cereal Straw

[FROM OUR REGULAR CORRESPONDENT]

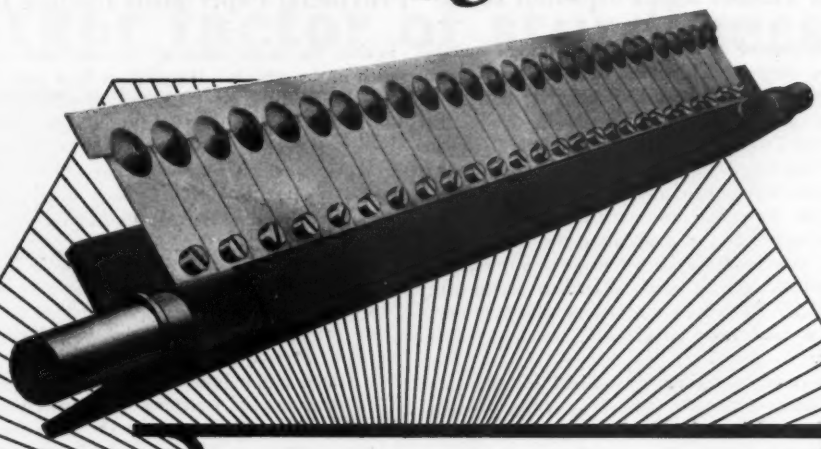
WASHINGTON, D. C., November 25, 1925.—According to a report from Trade Commission Lynn W. Meekins, Ottawa, experiments recently conducted by the Provincial Government of Alberta have demonstrated to the satisfaction of technical exports that the manufacture of news print and other kinds of paper from cereal straw is commercially practicable. With the cooperation of the Forestry Branch of the Department of Interior at Ottawa, tests were made in the Forests Products Laboratories in Montreal with straw shipped direct from Alberta. The Bache-Wiig process was employed and was reported to yield a very satisfactory percentage of cellulose from which newsprint, wrapping paper, sheathing paper, ham and bottle wrappers, carton boards, and insulating board were made. A semi-commercial plant was installed in order to determine the actual cost of production of pulp and paper from straw.

German Paper Industry Conditions

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—The German paper industry continues to operate at a somewhat higher level of production than is the case in a majority of other trades, according to a report from Assistant Commercial Attache Douglas Miller, Berlin. The domestic demand for some varieties is reported to absorb production and firms have been declining export orders in order to confine themselves to domestic business. Terms of payment are said to be granted for as long a period as four months, and in many cases further extensions of credit must be given. The usual rate of interest payable after this period is 2 per cent per month, but in a great number of cases it is not collected. The tendency in foreign trade in the last few months has been to increase the sales of paper products and to curtail those of paper and board.

The Vickery Doctor



The Doctor for Dryers

A large and rapidly growing number of mills in this country and abroad now consider the Vickery Doctor standard dryer equipment.

The reasons are obvious. The Vickery Doctor is trouble-proof. It is readily attached to existing supports. It requires no adjusting and will not score the roll. It keeps every speck of scale, fuzz and dirt off the dryers, saving steam and preventing cockles and breaks.

Let us send you a Vickery Doctor for 30 days free trial. Try it on one dryer. You'll quickly see why you, too, should standardize on Vickery Doctors for your dryers.

BIRD MACHINE COMPANY
South Walpole Massachusetts

BIRD MACHINERY

Western Representative
T. H. Savery, Jr., 224 So. Michigan Ave.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Limited
260 St. James Street
Montreal, Canada

Ontario Paper Mills to Standardize Safety Work

More Extensive Campaign to be Carried Out to Reduce Number of Mishaps—Imposition of Duty on Christmas Trees Has Little Effect in Decreasing Importation—Bush Fires Damage Much Timber and Pulpwood Land—Provincial Paper Mills Declare Dividends

TORONTO, Ontario, November 23, 1925.—That the recent imposition of a 10 per cent. duty on Christmas trees imported from Canada into the United States will have little effect in decreasing the importation, is the opinion of George Carrthers, of Toronto, president of the Interlake Tissue Mills and former of the Canadian Pulp and Paper Association. A general embargo on trees being shipped into all the States would be of greater benefit, he thought. Mr. Carrthers added that there was now some talk in the United States Department of Agriculture, of prohibiting the shipment of Christmas trees from Canada on account of possible introduction of harmful insects. Statistics quoted by Mr. Carrthers stated that, in the year 1924, 1,951,187 Christmas trees were imported into the United States, of a total value of $256,187, which averages only a few cents each.

There are trees that could be legitmately utilized for Yuletide purposes without sacrificing Canada's rapidly depleting forests, said Mr. Carruthers, who explained that the forester who possesses many hundreds and thousands of trees that must be thinned out has a right to cut certain evergreens, which would answer splendidly as Christmas trees. Many people think they are justified in chopping down scrub trees that will not figure in timber, but Mr. Carruthers contends that the scrub growth is an important factor in ground cover, remembering the fact also that forests stabilize the flow of streams.

Will Standardize Safety Work

Representatives from various pulp and paper plants met in Toronto recently to discuss important matters connected with safety work and exchange of opinion on the standardization of accident statistics. There was a representative attendance and it is felt as a result of the conference, a more intensive campaign will be carried on which will tend to reduct the number of mishaps and bring about a general improvement in the records shown by the different plants.

Heretofore there has not been the co-operation and standardization in the matter of conducting safety work that there should have been, each mill using its own system of statistics, which renders it almost impossible for one plant to compare its figures and results with the figures of another. The safety field is wide and varied and no one mill itself can solve all the problems. It was, therefore, decided to standardize the statistical methods of the different mills so that they will report all their accidents and compensation statistics on the same form to the Association. A. P. Costigane, secretary and engineer of the Ontario Pulp and Paper Makers' Safety Association, says that this will make it possible for any mill to get valuable information and data from other mills.

Another important point brought out was that the sympathy and support of foremen in the various departments should be enlisted. It was emphasized that unless the foremen put heart and soul in the work, those under them would not enthuse very much over safety.

The mills of the province have adopted the principle of working in groups and a temporary classification was drawn up, including Haileybury, Irquois Falls, Smooth Rock Falls, Kapuskasing, Sturgeon Falls and Espanola in one group. Reprentatives of this group will work together by visiting other plants and exchanging ideas and information.

Will Ban German-made Paper

The Toronto Board of Education has adopted a strong attitude against the importation of German-made paper which has been used in the schools. Instructions have been given to a number of principals that no goods are to be handled without requisitions from the Board. A recent disclosure that German-made paper had been purchased and employed to a large extent in the educational institutions naturally aroused considerable resentment among the school trustees, especially in view of the fact that practically all kinds of paper are manufactured in Canada.

Brighter Outlook for Pulpwood

Although the big lumber and pulpwood camps in the Thunder Bay district of Ontario, have completed winter organization and orders have been received in the Fort William branch of the Employment Service of Canada to cease sending men, some work is now available in a few of the smaller camps. A number of pulpwood operators are watching the market very closely in the hope that the mills will soon enter the field for larger quantities of supplies. There is a little more cheerful tone in regard to the pulpwood situation generally, and while prices are comparatively low, there is every indication that if the demand for pulp and paper continues to grow in strength as much as it has for some time past, pulpwood will sooner or later come to its own.

Many Fires Wiped Out Pulpwood

In the past season there were 182 bush fires in the area administered by the Ontario forestry branch office in the Sault district which is over three times the number of fires in the same district last year. Altogether these fires swept over 41,400 acres of land, of which 6,000 acres was unbroken forest land, which it will take generations to restore to its previous value as timber or pulpwood land. The cut-over burned land ran to 6,400 acres, and there was 4,000 acres covered by new growth, while 25,000 acres was barren or previously burned over areas. The causes of the fires show some interesting points. More fires were attributed this year to carelessness by campers than to any other cause, the number for which the blame was laid at their door being 65.

Provincial Company's Extra Dividends

The Provincial Paper Mills Company, Limited, Toronto, following the practice established in 1921 and 1922, has declared a special dividend of 1 per cent. on the common, in addition to the regular quarterly distribution of 1½ per cent. The usual 1½ per cent. on the preferred is also announced. All three dividends are payable January 2nd next to shareholders of record December 15th.

Dean Howe Deplores Timber Waste

Dr. Howe, Dean of the Faculty of Forestry, University of Toronto, delivered an interesting address recently before the Forestry Club on the subject of "Waste." He quoted a statement made at the recent Forestry Conference held at Syracuse—that for the 24,000,000 feet of timber used annually in the United States, 34,000,000 feet are wasted—and compared this state of affairs with conditions in Europe, where there is a timber wastage of only ten per cent.

Deer Hunters Menace to Bushmen

The hundreds of hunters from the cities of old Ontario and the United States who fill the woods of the Sudbury, Ont., district at present, are this year presenting a serious problem to the lumbermen. The red-capped sportsmen, armed with Winchesters, Springfields and even some with Ross rifles, have shown themselves ignorant of the significance of tote roads and blazed trails,

Autocar compact design gives a larger factor of sturdiness

4-Cylinder Autocar owned by the
Interstate Cordage & Paper Co., Pittsburgh, Pa.

The compactness of Autocar short wheelbase design eliminates excess weight and makes more of the total over-all weight available for the live pay load.

With extra strength and ruggedness concentrated into less space, Autocars are particularly adapted to hauling loads where dead weight is large in proportion to bulk.

Autocar more even weight distribution is another example of how Autocar chassis design gives sturdy support to the pay load without the encumbrance of unnecessary dead weight.

The Autocar Company, Ardmore. Pa.

ESTABLISHED 1897

Direct Factory "Autocar Sales and Service" Branches or Affiliated Representatives in

*Albany	*Buffalo	*Detroit	*Memphis	*Paterson	*San Francisco	Tampa
*Allentown	*Camden	*Erie	Miami	*Philadelphia	*San Jose	Trenton
Altoona	*Charlotte	*Fall River	*Newark	*Pittsburgh	*Schenectady	*Washington
*Atlanta	*Chester	*Fresno	*New Bedford	*Providence	Scranton	West Palm Beach
*Atlantic City	*Chicago	*Indianapolis	*New Haven	*Reading	Shamokin	*Wheeling
*Baltimore	*Cleveland	*Jersey City	*New York	*Richmond	*Springfield	Wilkes-Barre
Binghamton	Columbus	Lancaster	*Norfolk	*Rochester	*St. Louis	Williamsport
*Boston	*Dallas	*Lawrence	*Oakland	*Sacramento	*Stockton	*Wilmington
*Bronx	Denver	*Los Angeles	Orlando	*San Diego	*Syracuse	*Worcester
*Brooklyn						York

* Indicates Direct Factory Branch

Autocar

gas *and* electric trucks

EITHER OR BOTH - AS YOUR WORK REQUIRES

and the lumbermen, in order to protect their employees, have found it necessary to post warning notices on the trees throughout their limits. The wary nimrods with red stripes on their coats and the scarlet caps donned for self-protection, have little thought for the bushman of the country, and many near fatalities have been reported.

Cost of Camp Supplies Higher

The Shevlin-Clarke Company., of Fort Frances, Ont., report that up to the present their camps are manned only to the extent of about 75 per cent. of capacity, and just at present they have over 1200 men in the woods. The cost of supplies is higher than last year and this refers especially to such items as butter, bacon, etc. Men are plentiful and at present the wage scale for new men in the bush is from $25 to $30. The older hands—those who have been in the service of the company during previous operations—are receiving last years schedule.

Miscellaneous Trade Notes

James McCullough, of Toronto, who for some years has been the Ontario representative of the Brompton Pulp and Paper Company, East Angus, Que., has been transferred to Montreal, and has been succeeded by William Tait.

Robert Currie, of the Dominion Paper Company, Montreal, was a caller on the trade in Toronto recently.

A charter has been granted to the Radio Pulp Corporation, with headquarters in Ottawa, and a share capital of $50,000, to manufacture, buy, sell and deal in pulp, paper and kindred lines.

E. H. Wilkinson, head of the Wilkinson Paper Company, Toronto, was on the air the other evening through a local broadcasting station, and gave an interesting talk on "Paper."

W. J. Trimble, pulp and paper mill contractor, Toronto, has returned from Port Arthur, where he spent some time on business.

The offices of the United Paper Mills, Spadina Ave., Toronto, have been rearranged and greatly improved for the enlarged staff.

John Gibb, of Clark Bros. & Co., Winnipeg, wholesale stationers and paper jobbers, was a business visitor to Toronto recently.

The Newspaper Worker

Universally acknowledged as one of the most valuable aids to all who write for the press, is *The Newspaper Worker*, by the late James Philip MacCarthy, for 25 years one of the Editors of the *New York Herald*. This comprehensive work, first published in 1906, ran through several editions, but had been out of print for many years.

In response to a persistent demand, Frank-Maurice, Inc., Publishers, of 15 W. 37th street, New York, have reissued the book in a much handsomer form, but without altering the text in any way.

The *Newspaper Worker* was written from a mass of notes jotted down from time to time during fifteen years of practical newspaper reporting. It is a systematic and comprehensive manual, covering the whole field of journalism, magazine and descriptive writing.

With this book in hand the writer finds himself in possession of information that it would take him years to glean with no guide save his own painfully acquired experience.

The book contains a complete treatise on newspaper work; a splendid list of synonyms; explicit directions for reporting a college commencement to covering a sensational murder; a section on "headline" writing, proofreading, grammar and rhetoric in all its forms.

There are besides chapters on the Law of Libel by William M. Wherry, Jr., author of *Public Utilities and the Law*, on Tabloids and Pictorials by Francis Judson Tietsort, veteran New York journalist, and an introduction by L. J. deBekker.

Bids for Government Paper

WASHINGTON, D. C., November 25, 1925.—The Government Printing Office has received the following bids for 40,000 pounds of 26x38" of plain chip board; Dobler & Mudge, at $44.96 per ton less 2%; Mathers-Lamm Paper Company, $43.25; Virginia Paper Company, $44.98; T. A. Cantwell & Co., $44.75; Philip Rudolph & Son, Inc., $49.00; United Paperboard Company, $42.50; R. P. Andrews Paper Company, $47.25; Reese & Reese, $43.65; Lindemeyr & Harker, $45.00; and the La Boiteaux Company, $41.50.

The Government Printing Office has received bids for 3,500 lbs. back-lining paper for case making machines, 2,500 pounds in 9¼" rolls, and 1,000 pounds in 11⅜" rolls, as follows: Whitaker Paper Company, 6 cents per pound; R. P. Andrews Paper Company, 5.23 cents; Barton, Duer and Koch Paper Company, 5.25 cents; Dobler and Mudge, 5 cents; Reese and Reese, 5.28 cents; Lindemeyr and Harker, 5.38 cents; Old Dominion Paper Company, 4.29 cents.

The Printing Office has also received bids for 50,000 white window envelopes, 4⅛ x 9½" as follows: Union Envelope Company, $2.05 per thousand; United States Envelope Compony, $1.91; Cles Envelope Corporation, $2.09; and Mathers-Lamm Paper Company, $2.00.

The Bureau of Supplies and Accounts, Navy Department, will receive bids on December 8 for 100,000 packages of paper towels.

The Government Printing Office will receive bids on November 27 for 13,200 pounds (400 reams) of 28x34", 33 pound, white bond paper. Bide will also be received on the same date for 300 reams (12,000 pounds) of 31½x36", 40 pound sulphite bond paper, and for 3,150 pounds (100 reams) 24x38", 31½ pounds salmon bond paper.

Interstate Decision Upholds Mathieson Alkali

Full tank car rates and privileges are definitely assured to the Mathieson multi-unit chlorine tank car hereafter, under an order of the Interstate Commerce Commission which directs the railroads, not later than December 10, 1925, to cancel their schedules which would have so increased the freight charges on chlorine, shipped in the multi-unit car, as to render its use commercially impracticable.

This favorable decision completely supports the contention of the Mathieson Alkali Works, and successfully terminates their long drawn out and expensive efforts to develop the multi-unit car, which, based upon their experience with chlorine, they believed to be the perfect vehicle for the transportation and handling of liquid chlorine. Extension of this principle to the handling of other compressed gases is now possible.

The work of the Mathieson organization along these lines has proven a great forward step in the reduction of hazard; has developed a container of superior efficiency, and has resulted in marked economies to the consumer of liquid chlorine. The increase in liquid chlorine produced and marketed, since the first Mathieson multi-unit car went into service, is most impressive.

The idea of the ton container was originated by the Mathieson organization before the war, and after its practicability had been demonstrated, they saw the need for a type of car which would enable improved methods of handling. As a result, the multi-unit car was designed. The railroads did not oppose handling this car on the tank car basis of rates because of the number of tanks thereon. The fact that these tanks were removable, and were in fact being removed at the point of shipment for filling under the Interstate Commerce Commission regulations, and in some cases were being removed from the under-frame of the car at destination, was the reason given by the railroads for denying tank car rates and privileges to the multi-unit tank car.

In the face of opposition from various interests, the Mathieson Company continues to advocate the use of this car, which increasingly demonstrated its adaptability to the uses of varied consumers, and increased their fleet of this type of car. As a result of the

KENWOOD

WOOL PRODUCTS

MANY Mills making TISSUE have proved that--

KENWOOD TISSUE FELTS

reduce their costs by providing--
Easier starting and running--
Greater water removal ability--
Decrease in broke--
Greater speed possibilities--
Greater strength--
Longer life.

Ask the KENWOOD Salesman

F.C.Huyck & Sons
KENWOOD MILLS, Albany, N. Y.
KENWOOD MILLS LTD.
Arnprior, Ontario, Canada

Mathieson's protest to the Interstate Commerce Commission, against the railroads' practices, the Commission ordered the railroads to extend to the multi-unit car full tank car rates and privileges and return to the Mathieson Company all excess freight charges which they had collected.

The present decision is the result of an effort on the part of the railroads to publish a new schedule which defined a tank car in language having the effort of barring the multi-unit car from service, entirely, by compelling a permanent attachment of the container to the under-frame at all times, under penalty of freight charges varying from 200 per cent to 300 per cent over the charges applicable to similar shipments in single-unit tank cars. To prevent this action on the part of the railroads becoming effective, the Mathieson, supported by many consumers, protected to the Interstate Commerce Commission, and in response the Commission now definitely say that the multi-unit tank car is entitled to tank car rates.

Paper Maker's Mardi Gras Frolic

The accompanying picture of the Consolidated Paper Company's "Horn of Plenty" float in the Monroe Mardi Gras indicate that these Monroe folks know how to play, as well as to make Paper Boxes and Shipping Containers.

Every year the city of Monroe, which is very largely a paper town, holds a community frolic on Hallowe'en, which they call a Mardi Gras. One of the principal features of this Mardi Gras is a huge parade at night and this photograph tells its own story as to how the local industries enter into the spirit of the occasion.

This remarkable float was built by the Consolidated Paper Company's employees on a specially constructed wagon thirty-six feet long. The "Horn of Plenty" and the large shell were finished in gold and silver. The typical workman's cottage was complete in every detail with electric lights, windows, doors, curtains, fireplace and after the parade was over it was presented for a play house to the grandchildren of the president of the company.

CONSOLIDATED PAPER CO.
ASSURES PROSPERITY AND HAPPINESS TO 2000 HOMES IN MONROE.
EARNINGS OF $320 EMPLOYEES $3,600,000.00 ANNUALLY

CONSOLIDATED PAPER CO.'S BIG FLOAT

This float was brilliantly illuminated with concealed flood lights and presented a beautiful spectacle as it was drawn over the line of march by three teams of regular circus style horses.

The characters on the float and on the horses were all recruited from the company's employees and the banners on the side of the float tell a very interesting story of the part the Consolidated Paper Company plays in the prosperity of the community.

Axel H. Oxholm Appointed to New Post

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 24, 1925.—Axel H. Oxholm, Chief of the Lumber Division of the Department of Commerce, will be appointed Director of the National Committee of Wood Utilization, by Secretary Hoover, within the next few days.

Secretary Hoover has made strenuous efforts for some months to obtain a $10,000 a year man for this job but has been unsuccessful up to this time. The appointment of Mr. Oxholm may be only temporary, as Secretary Hoover has expressed himself as being anxious to have Mr. Oxholm continue his splendid work in the export field.

Boston Paper Trade in Healthy Condition

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 20, 1925.—One of the most refreshing reports of this week's survey of the local paper trade came from the coarse paper division where it was said that the demand for Kraft and all the other active lines of wrappings and merchandising papers was better than it had been for many months. The call for these grades seems to be steady and the orders are for generous quantity.

Prices remain firm and the practice of price-cutting that was prevalent in this branch of the trade some time ago seems to be on the wane. So, at this stage of the game, the coarse division is having its innings and making good use of them.

What is said of the coarse division may be said of the paper trade in general in this section. There has been no let up since early in October. New England, according to various reports, is enjoying a healthy business. This naturally is reflecting itself upon various trades. The paper houses are sharing in it.

Boston, at this writing, is experiencing one of the earliest periods of holiday buying witnessed here in many years. The "shop early" appeal is being heeded. Some of the stationers told the writer that many Christmas retail goods have been sold during the past month.

The demand for the coarse papers, it is believed, comes from those sources which are supplying the early holiday buyers. Taking everything into consideration, a glance at October's and November's books of 1924 and a glance at the 1925 books of the corresponding months shows that this year is well in the lead in about eight cases out of ten.

The fine grade houses are feeling the demand too, more particularly in the engraved and greeting card branches. There is also a steady call for special jobs. Booklets and trade folders, an outcome of the Direct Mail activities, are fast coming to the fore as real business getters. All this means good business for the paper-man and he's getting it here in Boston. One house reports being "flooded" as a result of Direct Mail campaigns.

Sharing in the good business, of course, are the paper box mills although the paper box volume is far from what it should be. Corrugated containers and shipping boards, chip and news, had a very active week.

One of the surprising "hold-overs" is the continued activity in building papers. With ideal weather and a record breaking building era in this section, this division is enjoying excellent business.

Old papers, especially Kraft, are being sought by the mills, but this is the only grade that is moving in this part of the industry. Most of the other grades the mills can buy at their own price, it is reported.

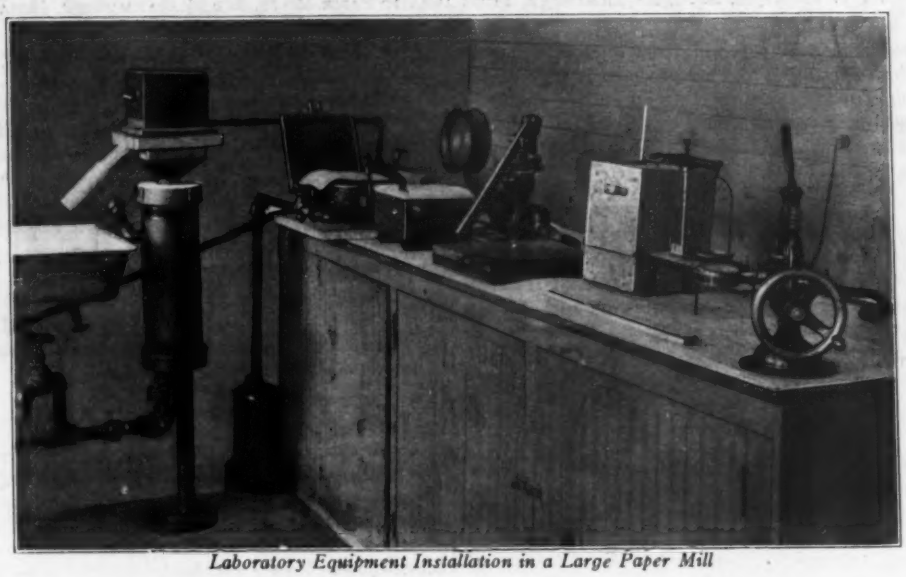
Jessup & Moore Co. Awards Contract

[FROM OUR REGULAR CORRESPONDENT]

WILMINGTON, Del., November 21, 1925.—The Pusey and Jones Company has been awarded a contract for the erection of a $250,000 paper making machine in the local plant of the Jessup and Moore Company, a part of the $500,000 improvements and betterments planned by the latter corporation. The Pusey and Jones Company is working on three similar paper machines, which, with business of the same kind in view, will total about $2,000,000. The new contracts will assure the company's plan to work on double time for several months and will reduce the number of idle workmen here for a year to a minimum.

K. V. P. Send Out Novel Portfolio

The Kalamazoo Vegetable Parchment Company, manufacturers of parchment, waxed and bond papers, of Kalamazoo, Mich., are sending out an unique folder pocket containing fifty sample letterheads printed on K. V. P Bond in the various weights and colors, which is, a slight departure from the usual in K. V. P. advertising. These portfolios or file pockets are being supplied to distributors for their use in passing on to interested trade.



Laboratory Equipment Installation in a Large Paper Mill

Check Your Pulp Specifications *With* Valley Laboratory Equipment

Essential for Research

Experiments with new materials are much more efficiently and inexpensively conducted on a small scale in the laboratory than in the mill proper. Less labor and materials are required and the final analyses provide a definite basis upon which results can be expected from the mill. When proportions of materials have been worked out and tested in the laboratory before being placed on the large machines, the loss otherwise occurring in experimenting is eliminated.

Valley Laboratory Equipment furnishes an accurate means for checking and determining the specifications of different kinds and classes of pulp, the principal raw material that enters into your product. The quality of a finished sheet of paper depends to a great extent on the raw materials used—their proportions and preparation. It is here that Valley Laboratory Equipment performs a much needed service to the paper maker. This equipment substitutes accurate control for guesswork and substantial facts succeed unsupported opinions.

The design and operation of Valley Laboratory Equipment makes possible the definite fixing of hydration rate and the indexing of the susceptibility of a given pulp to hydration as well as the time to reach maximum strength. This apparatus allows for positive control of every detail in producing test sheets so each is made under comparative conditions. Tests executed on sheets made with Valley Laboratory Equipment result in a true index of the quality of a given pulp.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

Write Today *for* Laboratory Equipment Booklet

Manufacture of Paper in India

By T. Venkajee, B. A., Rajahmundry, The Carnatic Paper Mills, Ltd., Rajahmundry, India

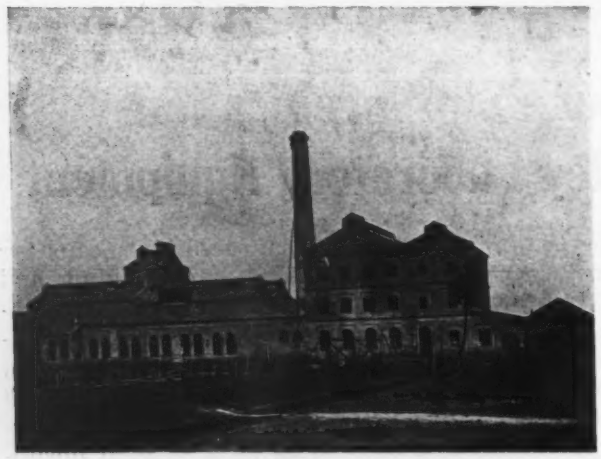
The annual consumption of paper in India is estimated to be 80,000 tons, of which only 30,000 tons are produced in Indian mills. Owing to a dearth of raw material on the continent and elsewhere, industrialists opened their eyes and found that a number of grasses and bamboo that grow in abundance in India are fit for paper making.

Mr. Wm. Raitt

Special mention must be made of the labors of Mr. William Raitt, F.C.S., M.I. Chem. E., cellulose expert of the Government of India, which during a score of years in this field of research, resulted in the announcements he made over those of Messrs. Routledge and Sindall, that bamboo is a very good raw material yielding a very high percentage of pulp by his "fractional digestion method" which requires a comparatively low bleach for high grade papers.

Origin

It was to utilize the vast abundant quantities of bamboo in the forests of Marrigudem, etc., alongside the banks of the River



Paper Mill in India

Godaveri, that Rao Bahadur, V. Atwar Chetty, Esq., B.A., retired district forest officer, in 1920 originated a scheme for the Carnatic Paper Mills, Ltd., Rajahmundry, with about $350,000 capital. Later, for the purpose of enlarging the concern the capital was increased to $1,000,000.

Place

The mill was erected at Rajahmundry, on the banks of the River Godaveri, affording natural advantages of cheap transportation of raw material, connected by rail to the coal mines not far off, and only about 35 miles from the seaport for export and import. It is at the head of a network of canals which supply the paddy straw, the second raw material.

The mill is designed for the soda process, manufacturing its own caustic and bleach and the recovering soda from the spent liquors. The maximum output is 4,680 tons of pulp and 1,560 tons of paper per year, using bamboo and straw as raw materials.

Bamboo Pulp Mill

The machinery was designed and supplied by the Stebbins Engineering & Manufacturing Company of Watertown, N. Y., U. S. A. Besides the ordinary pieces of machinery, such as screens, elevators, washers, etc., the most up-to-date types are:

1. Roll crusher and chipper designed for bamboo.
2. A vertical, stationary digester with Logan's patent circulator for steam.
3. Two tower bleachers.
4. Modern soda recovery plant with
   - (a) a double effect vacuum evaporator.
   - (b) an incinerator.
   - (c) leach cells.
5. Wood's machine (thickener).

All the machinery was erected, operated and found successful by the chemical engineer, Mr. E. P. Wood, a member of TAPPI, formerly of Canton, N. C., U. S. A.

Straw Paper Mill

Another department in the mills uses paddy straw, the machinery for which was designed and erected by Theodore Bell & Cie., Kriens, Switzerland, under the personal supervision of Mr. William Bauer, their erecting engineer. The equipment includes a straw cutter, a kollergang, spherical digester, edge runner, horizontal bleachers, two beaters (Hollander type), a paper machine 74 inches wide with a single cylinder drying roll with adjustment to increase the driers when necessary, variable and a non-variable speed steam engine, cutter and baling press, etc., all of the most modern design.

Power

The mills are designed for both steam and electric drive, being equipped with:

1. One Erie City boiler (horizontal, multi-tubular type), 250 boiler horsepower.
2. Three Niclausee boilers (Marine type, water tube boiler) with economizer and superheater self-contained; 185 boiler horsepower each.
3. The power house has a tandem compound drop-valve engine of 275 horsepower.
4. The electric department consists of
   - (a) 150 kilowatt alternator—3 phase, 50 cycle, 440 volt.
   - (b) 800 kilowatt steam turbine (Parsons type) with alternator coupled direct—3,000 r.p.m., 6600 volts, 3 phase, 50 cycle.
   - (c) and other equipment such as Edwards air pump, etc.
5. A water pumping station.

Government Aid

Owing to a slump in trade, capital was not so responsive as expected and the Government at Madras has therefore extended its help in

1. Supplying sufficient finances.
2. Reserving a large bamboo forest at the disposal of the mill.

Thus, with the facilities mentioned supplied by nature, state and public, the mill, which is the first and foremost of its kind in India, is bound to thrive at a prosperous speed.

Manufacture of Paper Leads at Holyoke

[FROM OUR REGULAR CORRESPONDENT]

Holyoke, Mass., November 18.—The manufacture of paper and paper products forms the principal industry at Holyoke, Mass., according to a census recently completed of manufactures in Massachusetts. The value of output in this line during 1924, reached $21,501,678, or 26.1 per cent of all products manufactured in the city during that year.

This tells the Story—

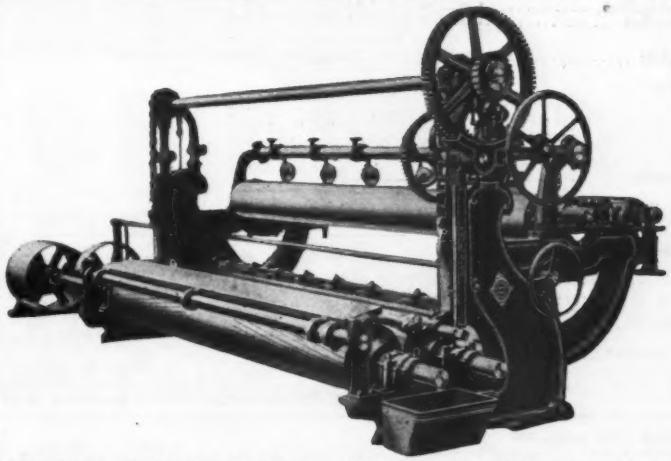
16 repeat orders from *one* mill

REPEAT ORDERS can mean only one thing—complete satisfaction. Sixteen repeat orders from one mill, nine from another, and batteries of four and five from many others—orders like these are recommendations that speak their own story forcibly.

If you require a dependable winder that will operate consistently and economically under pressure of high speed production, your choice should be the "Beloit." What it has done for others it can do for you.

The BELOIT DOUBLE-DRUM WINDER No. 87-B portrayed here is popularly regarded by the trade as the peer of all winders.

It is built for high speed and is successfully "keeping out of the way" of machines operated at over 1100 feet a minute. Its simplicity, ease of operation and dependable maintenance have won for it the unqualified support of the world's leading mills.



No. 87B—Beloit Double-Drum Winder, with Slitter Attachment

Write us for special Winder information blank. It will make it simple to quote you on your needs quickly—and without the slightest obligation.

Beloit Iron Works **Beloit, Wis., U. S. A.**

Since 1858 Builders of Paper, Board Mill and Container Plant Machinery

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending September 30, 1925, and for the Nine Months Ending September 30, 1925, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER

PAPER AND MANUFACTURES OF	September 1924 Quantity	September 1924 Value	September 1925 Quantity	September 1925 Value	Nine Months Ending September 30 1924 Quantity	Nine Months Ending September 30 1924 Value	Nine Months Ending September 30 1925 Quantity	Nine Months Ending September 30 1925 Value
Paper, except printed matter (total)	.....	9,227,589	.....	9,066,302	.....	87,912,314	.....	87,958,136
Printing paper—								
Standard newsprint ....lbs...free	215,979,306	7,946,048	221,375,019	7,771,696	2,009,600,574	75,473,985	2,111,782,364	75,626,019
Imported from—								
Finland	3,138,473	105,707	3,955,755	121,149	54,566,251	1,709,733	36,687,619	1,134,179
Germany	2,677,021	83,063	5,994,276	189,736	66,607,932	2,026,460	41,130,546	1,267,148
Netherlands	219,409	7,547	.....	.....	1,794,537	56,773	697,759	23,557
Norway	5,701,642	173,558	1,530,821	79,379	20,758,889	673,512	28,533,145	899,066
Sweden	14,960,783	471,313	10,714,527	327,780	87,308,715	2,766,347	98,588,149	2,972,372
Canada	188,903,205	7,093,918	199,075,851	7,050,477	1,775,243,356	68,141,556	1,895,391,166	68,952,899
Other countries	376,773	10,942	103,789	3,175	3,320,894	99,604	10,753,980	376,798
All other, n. e. s. ....lbs...dut.	2,830,656	117,193	1,082,126	52,950	20,466,788	849,101	13,387,566	640,443
Grease-proof and water-proof papers..lbs...dut.	23,189	5,414	139,112	19,365	1,112,616	123,533	1,482,968	192,792
Kraft wrapping paper....lbs...dut.	1,133,299	43,451	965,958	42,547	22,391,193	860,182	11,250,111	466,761
All other wrapping paper....lbs...dut.	1,343,493	51,435	279,035	14,064	18,043,522	694,037	4,461,435	206,199
Writing, drawing, bond, etc....lbs...dut.	241,775	63,457	235,688	68,866	1,951,362	436,611	2,241,112	518,009
Surface coated ....lbs...dut.	122,846	45,977	90,618	37,278	1,318,870	323,122	1,177,224	390,070
Tissue paper ....lbs...dut.	176,751	64,180	157,916	64,327	1,661,902	691,215	2,084,006	893,467
Paper boards—								
Pulp boards in rolls....lbs...dut.	5,431,966	143,619	6,890,211	169,777	59,883,767	1,660,955	55,033,742	1,447,870
Other paper boards, n. e. s....lbs...dut.	1,911,941	42,177	2,382,623	58,193	22,988,024	534,777	23,806,037	574,552
Cigarette paper, cigarette books and covers ....lbs...dut.	423,139	113,940	610,972	153,537	7,245,844	1,916,249	8,120,812	2,316,676
Photographic paper ....lbs...dut.	483,946	92,998	335,140	85,557	2,714,510	545,105	2,541,028	569,600
Hanging paper ....lbs...dut.	2,482,113	61,343	307,941	34,803	10,505,339	453,930	3,729,853	364,108
Paper boxes ....lbs...dut.	165,981	116,164	183,081	103,891	1,269,705	788,910	1,830,797	1,075,457
Duplex decalcomania, not printed ....lbs...free	43,757	9,417	41,283	11,790	352,335	83,776	319,244	82,592
All other ....dut.	.....	310,776	.....	377,661	.....	2,476,826	.....	2,593,521
Books and other printed matter (total)	.....	1,076,684	.....	1,051,411	.....	7,057,359	.....	9,314,723
Books and pamphlets in foreign languages ....lbs...free	234,679	152,998	172,792	147,647	1,742,947	1,043,653	1,479,882	1,133,327
Books, maps, music, etc., 20 years old lbs...free	20,300	267,731	28,880	189,517	271,579	1,261,854	296,108	2,677,989
Other books, etc. ....lbs...free	233,900	192,873	202,187	226,068	1,780,933	1,251,605	2,039,117	1,459,729
Books, pamphlets, and music, n. e. s..lbs...dut.	266,274	190,018	312,458	242,662	2,447,120	1,692,520	2,643,539	2,007,436
Maps, charts, and other printed matter n. e. s. ....dut.	.....	80,223	.....	68,606	.....	618,524	.....	688,151
Lithographically printed matter, n. e. s.—	9,172	14,082	10,115	11,317				
Cigar bands, labels, and flaps....lbs...dut.					87,794	111,954	132,962	115,699
Decalcomanias ....lbs...dut.	22,828	34,566	19,001	26,416	195,408	274,770	211,639	321,238
All other ....dut.	.....	144,193	.....	139,178	.....	802,479	.....	911,154

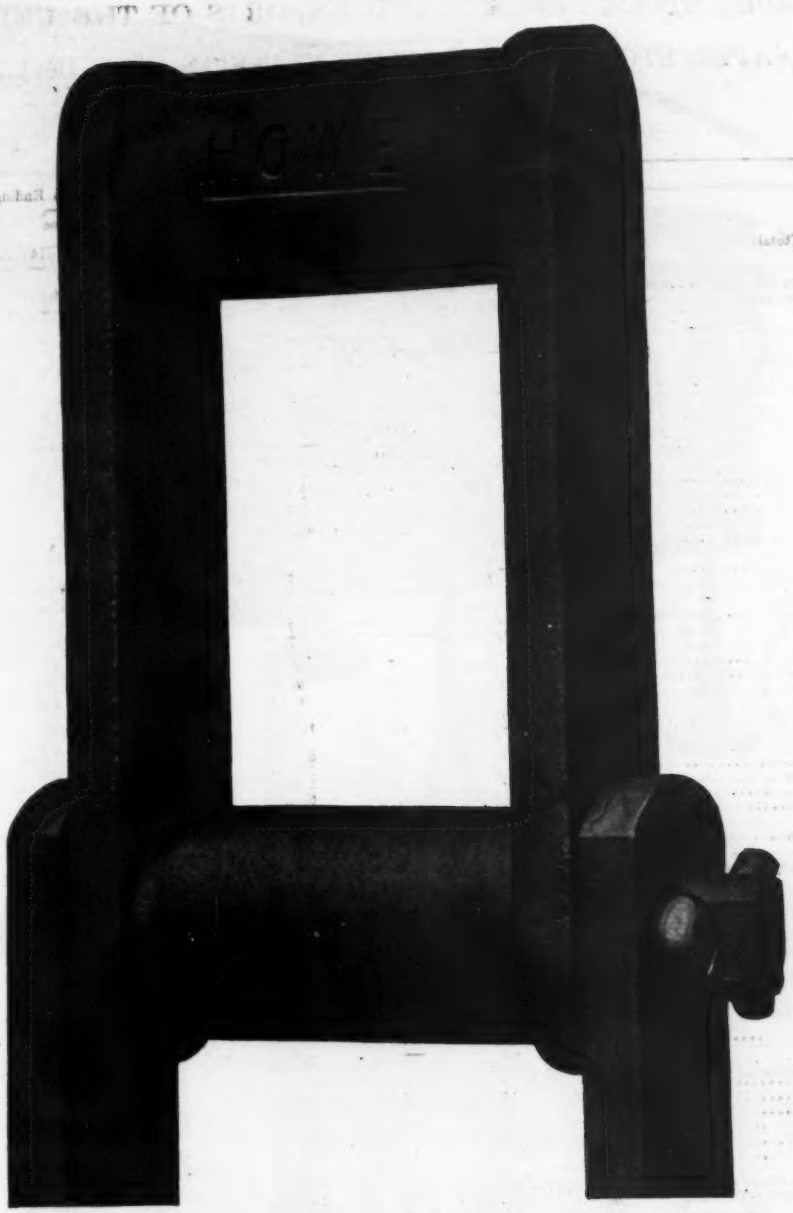
WOOD PULP

Mechanically ground wood pulp....ton..free	20,876	672,944	22,122	644,146	144,217	4,874,310	205,978	6,023,694
Chemical wood pulp—								
Sulphite, unbleached....ton..free	55,934	2,952,021	54,384	2,490,341	389,553	20,934,545	428,452	23,063,736
Sulphite, bleached ....ton..free	25,676	1,971,948	21,170	1,668,620	195,433	15,217,619	222,459	17,272,019
Total sulphite ....ton	81,610	4,923,969	75,554	4,158,961	584,986	36,152,164	650,911	40,335,755
Imported from—								
Finland	7,332	387,133	7,994	98,824	45,239	2,357,779	46,753	2,130,530
Germany	8,505	516,515	5,156	334,968	44,626	2,652,463	45,428	2,837,879
Norway	9,474	627,270	4,052	297,320	39,025	2,799,931	53,300	3,959,507
Sweden	31,037	1,728,622	18,323	1,092,966	203,460	11,599,636	201,982	11,889,949
Canada	24,422	1,619,701	38,984	2,274,622	234,589	15,651,334	280,943	18,227,903
Other countries	640	44,728	1,145	60,261	18,047	1,091,021	22,505	1,289,987
Sulphate pulp, unbleached (Kraft pulp ....ton..free	32,001	1,786,031	23,584	1,409,891	203,275	11,721,864	227,375	13,436,878
Imported from—								
Finland	.....	.....	1,033	50,130	9,374	451,208	11,393	600,164
Norway	1,848	98,761	329	21,754	9,570	477,466	6,036	355,049
Sweden	19,240	993,392	11,622	667,998	86,384	4,592,021	109,651	6,082,101
Canada	10,430	674,013	10,285	650,417	95,326	6,068,773	97,634	6,244,047
Other countries	483	19,865	315	19,592	2,621	132,296	2,661	155,517
Sulphate pulp, bleached....ton..free	4,559	251,859	515	30,794	15,255	851,519	10,258	631,027
Other pulp ....ton..free	200	13,827	70	3,018	1,588	91,482	1,973	140,629

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

Color, dyes, stains, color acids, and color bases, n. e. s. ....lbs...dut.	267,056	340,007	366,965	395,900	2,228,247	2,726,205	4,504,259	5,870,543
Imported from—								
France	7,431	12,514	6,707	11,059	88,654	129,907	101,539	138,437
Germany	116,629	150,477	197,894	194,208	1,067,318	1,225,926	2,310,627	3,108,797
Italy	8,757	14,143	18,779	23,683	114,545	156,821	182,956	223,960
Switzerland	120,885	146,048	99,738	108,016	739,895	953,723	1,431,522	1,772,058
United Kingdom	5,800	7,314	11,031	10,068	60,546	59,196	142,170	119,026
Other countries	8,004	9,511	32,816	48,866	157,289	200,632	335,445	508,265
Casein or lactarene ....lbs...dut.	1,096,557	75,620	1,160,898	205,184	13,971,159	1,110,923	15,885,948	1,294,951
Kaolin, china, and paper clay....ton..dut.	23,417	246,432	23,208	221,002	239,898	2,476,038	254,919	2,409,699

(Continued on page 49)



Combination Chain

Built by Chain Specialists For Elevating and Conveying Work

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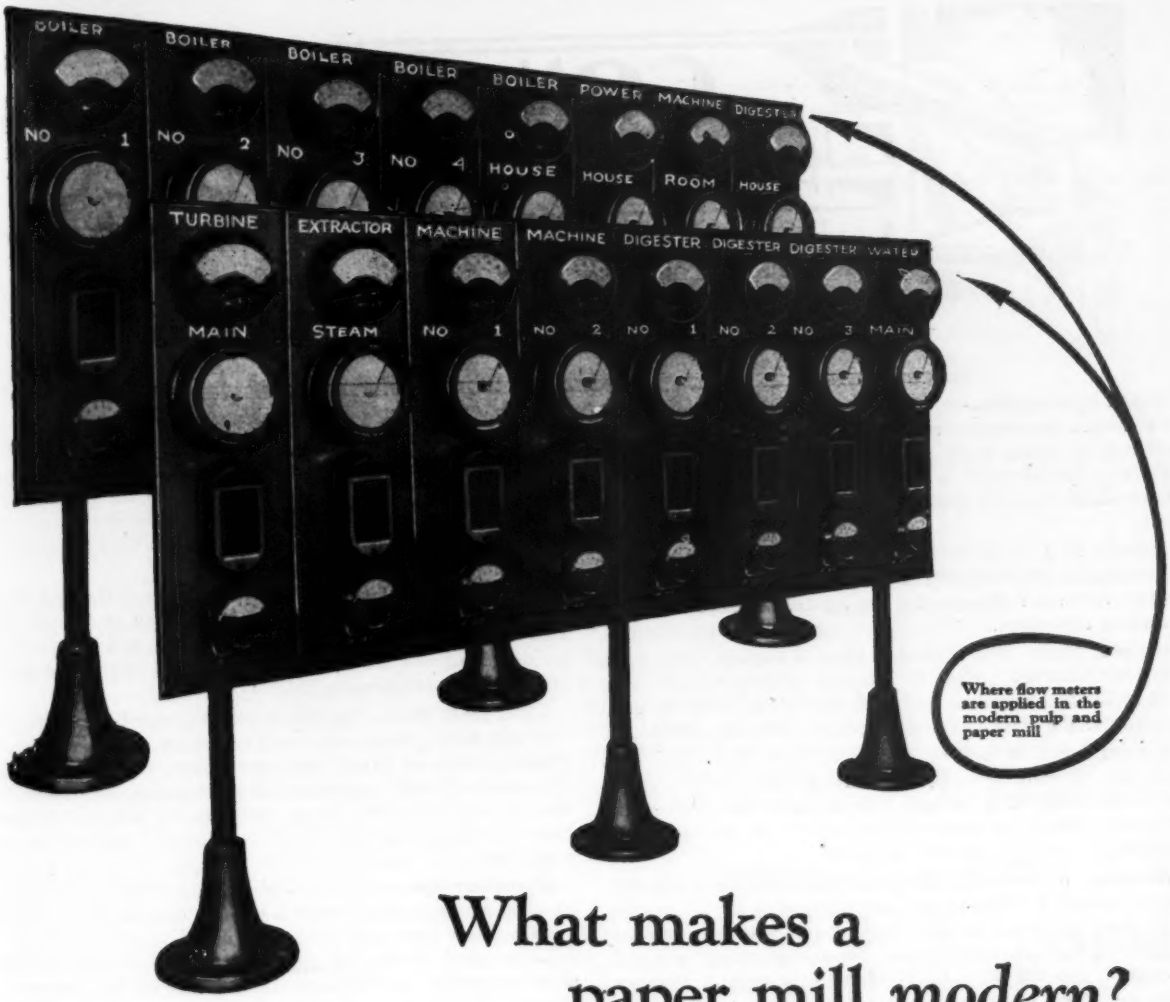
HOWE CHAIN

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 38*)

PAPER AND MANUFACTURES OF	September 1924 Quantity	September 1924 Value	September 1925 Quantity	September 1925 Value	Nine Months Ending September 30 1924 Quantity	Nine Months Ending September 30 1924 Value	Nine Months Ending September 30 1925 Quantity	Nine Months Ending September 30 1925 Value
CRUDE PAPER STOCK								
Rags for paper stock ..... lbs...free	55,392,289	1,322,789	47,478,124	1,257,571	359,420,818	7,797,959	450,885,908	12,644,669
Waste bagging, waste paper, etc..... lbs...free	12,132,596	144,776	13,498,201	256,761	80,240,733	932,776	93,876,779	1,638,918
Old rope and all other paper stock... lbs...free	8,694,451	399,122	3,461,905	192,405	74,572,433	3,922,877	50,252,552	2,770,137
EXPORTS—PAPER								
Paper, except printed matter (total)	.....	1,885,090	.....	1,986,463	.....	17,812,211	.....	17,754,093
Printing paper—								
Newsprint paper ..... lbs.	1,815,802	97,008	3,737,059	160,403	25,355,675	1,304,715	32,128,342	1,416,432
Exported to—								
Canada	48,603	4,763	78,273	4,374	783,343	61,673	850,067	58,895
Central America	23,170	1,159	82,125	3,732	522,998	28,970	858,759	44,283
Mexico	309,598	18,994	197,791	10,423	1,951,368	103,272	1,435,144	69,330
Cuba	863,335	42,213	1,423,653	55,518	14,234,627	647,893	14,281,492	586,462
South America	165,509	7,483	411,146	20,258	1,699,822	95,209	6,048,634	276,393
China	34,872	2,596	452,296	19,220	1,718,568	125,500	2,577,860	103,094
Philippine Islands	288,587	12,824	450,034	18,203	3,052,780	148,586	4,101,502	183,649
Other countries	82,128	6,976	641,741	28,675	1,392,169	93,612	1,974,884	94,326
Book paper, not coated ..... lbs.	2,157,093	222,270	1,319,136	155,845	12,880,900	1,492,854	12,878,555	1,465,448
Exported to—								
United Kingdom	7,023	1,186	75	22	686,349	134,553	111,014	19,015
Canada	82,915	12,435	109,628	15,680	1,325,376	172,005	1,654,399	199,860
Central America	78,506	9,310	46,307	4,740	460,469	50,918	545,365	58,413
Mexico	253,955	28,113	92,811	16,419	1,286,657	143,133	1,393,746	167,215
Cuba	299,234	34,963	251,427	29,154	2,638,463	298,633	3,492,848	348,580
Argentina	12,861	1,987	6,635	1,808	544,451	51,113	497,560	51,801
Brazil	85,593	10,533	10,929	940	278,764	37,500	248,971	36,438
Venezuela	18,310	2,308	189,260	13,401	412,741	45,495	577,041	52,249
Other South America	118,914	14,692	92,435	9,423	743,452	90,296	894,281	88,269
China	891,580	76,163	110,410	24,210	1,897,477	181,756	693,789	150,541
Philippine Islands	163,753	13,162	206,487	17,714	942,257	83,361	1,135,488	107,795
Australia	50,128	5,634	26,391	2,536	402,464	45,452	367,347	40,785
Other countries	94,321	11,784	176,233	19,798	1,261,980	158,959	1,266,706	154,487
Cover paper ..... lbs.	57,851	12,576	112,859	21,583	570,224	104,882	902,870	174,544
Greaseproof paper and waterproof paper.... lbs.	48,410	8,186	224,433	33,414	1,234,734	142,188	1,538,536	197,592
Wrapping paper—								
Kraft paper ..... lbs.	48,091	8,387	64,555	7,104	442,297	54,201	523,029	46,051
Other wrapping ..... lbs.	1,886,837	140,360	1,863,860	141,742	17,704,824	1,450,183	20,589,310	1,570,018
Surface-coated paper ..... lbs.	278,203	44,073	286,033	36,690	2,536,132	393,150	2,750,452	403,885
Tissue and crepe paper ..... lbs.	248,370	78,748	266,806	70,885	2,143,748	562,608	2,526,372	671,855
Toilet paper ..... lbs.	260,373	34,117	430,019	52,025	3,065,834	360,413	3,813,744	454,720
Paper towels and napkins..... lbs.	103,592	21,376	189,421	21,026	1,077,205	172,173	1,158,486	172,731
Box board ..... lbs.	.....	.....	2,145,670	81,953	.....	.....	12,636,921	470,605
Bristols and bristol board ..... lbs.	35,966	4,190	120,618	13,444	689,667	88,033	692,832	84,907
Other paper board and strawboard..... lbs.	5,768,827	188,514	2,183,492	117,156	57,131,179	2,238,023	23,743,234	1,161,501
Sheathing and building paper ..... lbs.	639,342	35,651	632,549	27,975	3,936,734	188,843	9,308,242	418,124
Wall board of paper or pulp..... sq. ft.	1,032,570	40,184	1,299,250	46,356	13,162,677	446,352	9,815,477	331,590
Blotting paper ..... lbs.	165,304	18,952	244,963	29,145	1,771,830	219,025	2,195,060	264,266
Filing folders, index cards, and other office forms ..... lbs.	33,128	11,003	35,293	16,237	336,119	121,339	458,251	154,214
Papeteries (fancy writing paper) ..... lbs.	71,202	25,056	71,115	26,052	318,172	118,710	376,925	128,973
Other writing paper ..... lbs.	327,343	58,556	345,545	67,765	3,522,915	557,427	2,490,894	466,956
Cigarette paper and books..... lbs.	77,387	27,414	37,839	12,050	731,280	262,081	358,157	105,698
Photographic paper ..... lbs.	142,172	124,361	191,306	133,655	1,242,021	1,224,227	1,337,233	1,107,687
Paper hangings (wall paper)..... yds.	1,260,295	34,413	596,060	26,960	18,163,268	426,520	17,893,160	458,067
Paper bags ..... lbs.	1,008,664	80,941	1,346,553	128,611	7,850,415	737,132	9,875,050	855,804
Boxes and cartons ..... lbs.	1,223,091	109,968	1,722,210	126,085	10,041,589	841,933	12,514,953	962,022
Carbon paper ..... lbs.	78,974	61,904	80,120	56,552	683,398	535,515	774,265	627,305
Envelopes ..... lbs.	175,921	35,168	198,251	35,590	1,773,183	356,135	1,898,274	359,980
Cash-register and adding-machine paper.... lbs.	124,379	13,961	126,086	13,582	889,981	101,327	1,195,517	124,507
Other paper and paper products..... lbs.	3,366,591	347,753	1,505,994	326,578	28,430,146	3,212,222	15,978,893	3,098,611
Books, maps, pictures, and other printed matter (total)	.....	1,843,218	.....	1,627,664	.....	14,891,792	.....	15,513,988
Books and pamphlets ..... lbs.	3,068,069	1,000,465	3,661,387	834,234	24,572,737	7,310,554	31,151,649	7,663,122
Maps and charts ..... lbs.	20,610	14,657	17,006	20,290	122,724	118,799	150,015	159,233
Music in books or sheets ..... lbs.	51,086	36,827	47,381	27,971	480,725	294,425	370,993	226,939
Souvenir post cards ..... lbs.	24,160	20,440	36,067	29,630	272,624	140,791	349,604	173,584
Lithographically printed matter, except post cards and maps ..... lbs.	207,609	207,668	314,080	164,848	1,673,633	1,463,828	2,463,426	1,451,356
Playing cards ..... Packs	664,050	66,954	606,706	64,835	4,832,085	535,727	5,999,009	631,706
Other printed matter ..... lbs.	1,246,011	496,207	1,635,226	485,856	13,171,375	5,027,668	14,706,243	5,208,048
WOOD PULP AND PAPER STOCK								
Sulphite wood pulp ..... tons	1,836	113,722	2,119	141,139	14,725	885,094	17,325	1,015,370
Soda wood pulp..... tons	90	8,637	90	8,962	1,172	109,588	1,758	163,808
Other wood pulp ..... tons	740	91,254	176	9,541	3,835	381,313	6,079	710,946
Rags, and other paper stock ..... lbs.	9,462,356	194,573	13,002,624	355,266	95,759,021	1,636,903	133,688,649	2,381,343
PAPER AND PULP MILL MACHINERY								
Paper and pulp mill machinery..... lbs.	466,606	83,983	1,098,544	169,550	7,949,598	1,626,208	4,543,306	1,105,968



Where flow meters are applied in the modern pulp and paper mill

What makes a paper mill *modern?*

Modern methods.

And "modern methods" include correct operation, efficient operation, and proper cost accounting —all based on data supplied by flow meters.

Don't be without flow meters to check waste and inefficiency, to determine cost distribution, to duplicate economical operation, to give instant notice of abnormal conditions and eliminate costly delays.

The instrument panels of G-E Electrically Operated Flow Meters can be grouped so that the combined performance of your whole plant can be watched—right in your office.

Flow Meters
MECHANICALLY OPERATED
ELECTRICALLY OPERATED

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN ALL LARGE CITIES

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

South Hadley, Mass.—The American Tissue Paper Company has warded contracts for the erection of its proposed new addition, on which work will be placed in progress at once. It will be one-story, 52 x 105 ft., to cost in excess of $35,000. Hawes & Howes, 199 High avenue, Holyoke, Mass., are architects.

Passaic, N. J.—The Howe Paper Box Company, Park Place, is considering the rebuilding of the portion of its plant destroyed by fire, November 20, with the loss reported at close to $50,000, including equipment.

Ironwood, Mich.—The Flambeau Paper Company, Park Falls, Wis., has acquired a tract of property in Iron County, near Ironwood, for a consideration of $23,000, and is said to be planning to use the tract in connection with pulpwood production.

Stevens Point, Wis.—The Wisconsin River Paper and Pulp Company, Neenah, Wis., has preliminary plans under way for the construction of a modern type concrete dam across the Wisconsin River, for water power service at its local mill, replacing an existing wooden structure.

Wheeling, W. Va.—The No-Leak Paper Dish Company, McColloch street, is planning the early rebuilding of the portion of its plant destroyed by fire, November 6, with loss reported at $150,000, including equipment. The reconstruction will cost close to a like amount. E. T. Maxwell is general manager.

Boston, Mass.—The Howard Paper Box Company has leased a floor in the building of Factory Buildings Trust, known as Building No. 4, for a local plant, and will arrange immediate occupancy.

Memphis, Tenn.—The Simmonds Paper Company is perfecting plans for the erection of a new building at the Parkway and Riverside avenue, to be used largely for storage and distributing service. It is estimated to cost $35,000.

Kaukauna, Wis.—The Little Rapids Pulp Company, with local plant, has awarded a general contract to W. E. Ule & Co., Stevens Point, Wis., for the erection of its proposed new pulp mill on site recently selected at Manitoulin Island, near Kagawong, Ont., to consist of a main unit and auxiliary buildings, estimated to cost $200,000, with equipment. Work will be placed in progress at an early date.

Seattle, Wash.—The Zellerbach Paper Company, 807 Western avenue, is planning the erection of a new four-story building at First avenue South and Atlantic street. It will be equipped for storage, distributing, and general operating service. An architect will be eselected to prepare detailed plans at an early date. William Guthrie is general manager.

Bastrop, La.—The Louisana Pulp and Paper Company is completing work on its enlarged mill and will place the new unit in service at an early date. The extension will represent an investment of close to $1,000,000, with machinery, and will provide for an extensive increase in production. An additional working force will be employed.

Brooklyn, N. Y.—The Prager Company, Inc., manufacturer and dealer in wall paper, has leased the fourth floor in Building No. 1, at the Bush Terminal, and will occupy for a local works.

Cincinnati, Ohio—The Bishopric Manufacturing Company, Spring Grove avenue, manufacturer of fiberboard and wallboard products, has work in progress on its proposed new addition, estimated to cost about $20,000, and plans to have the structure ready for service at an early date.

Plattsburg, N. Y.—The Lake Champlain Pulp and Paper Company has superstructure work under way on a new addition at its mill, to be one-story, 80 x 100 ft., and will have the building ready for the equipment installation in the near future. It will cost approximately $50,000.

Great Falls, Man.—The Manitoba Pulp and Paper Company, Fort Alexander, Man., has closed a contract with the Manitoba Power Company, Great Falls, for power suply at its mills. The company will arrange facilities, including substation, for this purpose, while the power organization will make extensions in its transmission lines and install additional power equipment.

Chicoutimi, Que.—The Chicoutimi Pulp Company is said to have preliminary plans under way for the construction of its proposed new plant unit in this section, and will likely proceed with the work in the near future. The initial work will cost close to $500,000, and the ultimate project more than twice this amount. The company is operated by the Quebec Pulp Co.

New Companies

Baltimore, Md.—The Gordon Tissue Mills, Inc., 1403 Fidelity Building, has been incorporated with a capital of 150 shares of stock, no par value, to manufacture and deal in tissue papers. The incorporators are Gordon Gatchell, John S. L. Yost and Roger Howell.

Savannah, Ga.—The Savannah Paper and Bag Company has been incorporated to manufacture and deal in paper bags and containers, boxes, etc. The incorporators are Morris and Meyer Blumberg, 315 Huntington street, Savannah.

Chicago, Ill.—The Rose Display Box Company, 111 West Washington street, has been incorporated with a capital of $100,000, to manufacture cardboard boxes and other containers. The incorporators are N. F. Leopold, A. B. Ballenberg and C. W. Morris.

Wilmington, Del.—The Champion No-Leak Paper Dish Company, care of the Corporation Trust Company of America, du Pont Building, Wilmington, representative, has been incorporated under state laws with a capital of $610,000, to manufacture paper products of various kinds.

New York, N. Y.—Graef & Company, Inc., has been incorporated with a capital of $100,000, to manufacture and deal in paper specialties, adhesive paper goods, etc. The company is headed by R. A. Graef, 80 Reade street, New York.

(Continued on page 43)

New York Trade Jottings

George W. Sisson, Jr., president of the Rapid River Paper Company, of Potsdam, N. Y., was a prominent visitor to this city last week.

* * *

Lieutenant Colonel Arthur Peuchen, a lumber manufacturer from Southern Alberta, Canada, has been studying conditions in the local paper industry.

* * *

Wilson Compton, secretary of the National Lumber Manufacturers Association, at Washington, D. C., came to New York for a short visit last week.

* * *

The Sutphin Paper Company, Inc., of 439 Lafayette street, New York, announces that J. C. Halliday, formerly with Vernon Brothers, has joined their sales force.

* * *

G. W. Mead and H. H. Curtis, president and sales manager respectively of the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis., arrived in New York last week for a short business trip.

* * *

The Eastern Manufacturing Company, of 292 Madison Avenue, New York, announces the appointment of the Sutphin Paper Company, Inc., of 439 Lafayette street, as an agent for Systems Bond and System Ledger.

* * *

R. S. Kellogg, secretary of the Newsprint Service Bureau, was in Washington the latter part of last week attending a meeting of the executive committee of the American Forest Week Committee, of which he is chairman. Mr. Kellogg also visited government officials.

* * *

Tamotsu Watanibe, connected with the Bureau of Forestry at Tokyo, Japan, arrived in New York last week, following a trip from the Orient to Europe. Mr. Tamotsu will journey soon to Canada, from there to the west coast and thence to Japan. The purpose of his tour, he said, is to study forestry in America and to inspect some of the paper mills here.

* * *

The Superheater Company, of New York and Chicago, announce the appointment of R. L. Ehmann as District Manager of their Industrial Department, with an office at 923 Union Trust Building, Pittsburgh, Pa. The former Manager, of the Pittsburgh Office, John R. LeValley, has been assigned to special duties with the company and may be reached through the New York Office.

Boston Paper Trade Association Meets

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 23, 1925.—The annual Fall meeting and dinner of the Boston Paper Trade Association was held last Thursday evening at the Exchange Club.

A reception was held from 6 to 7 o'clock, at which time acquaintances were renewed, and topics of interest to the trade were discussed.

At 7 o'clock, the banquet was served, at which nearly 100 members and guests were present. An orchestra furnished music during the dinner.

Following the dinner, President W. B. Stevenson, as toastmaster, introduced the Hon. Elias B. Bishop, Associate Justice of the Massachusetts Superior Court, who took for his topic, "The Work of the Criminal Courts." The speaker particularly lauded the work of the District Attorney's office in disposing of criminal cases.

The second speaker of the evening was the Rev. James Gordon Gilkey, D.D., of the South Congregational Church at Springfield, Mass.

Dr. Gilkey is well known to members of the paper trade, having spoken to them on several occasions. He chose as his topic, "The New Problem Confronting American Homes."

He spoke interestingly of the problem of bringing up the boys of today. Dr. Gilkey is closely associated with many boys' organizations, beside being an instructor at Amherst College, and is well qualified to talk on that subject.

Several new members were voted to membership during the business meeting.

Robertson Bros. Award Contract for Stokers

[FROM OUR REGULAR CORRESPONDENT]

The Robertson Company, of Hinsdale, New Hampshire, have awarded the contract for Stokers to be installed at the Robertson Brothers Division to the Flynn and Emrich Company, of Baltimore, Maryland.

The contract for heavy piping to connect this steam plant with that of the E. C. Robertson & Son Division was awarded to the Jennison Company, of Fitchburg, Mass.

The equipment, installed at the cost of about $15,000, will enable the company to shut down one boiler plant which can be kept in reserve.

Railroad Rates on News Print

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—Rates on news print paper in carloads from Merrill, Wis., to Keokuk, Iowa, have not been found unreasonable by John McChord, Attorney-Examiner of the Interstate Commerce Commission in a proposed report which he has submitted to the Commission. He finds, however, that the rates are unduly prejudicial and denies reparation. This is the proposed decision in docket No. 16769 of the Keokuk Shippers Association et al. against the Belt Railway Company of Chicago.

CONSTRUCTION NEWS

(*Continued from page 42*)

New York, N. Y.—The Northern New York Paper Corporation, care of the United States Corporation Company, 65 Cedar street, New York, has been incorporated under Delaware laws with capital of $10,000, to manufacture and deal in paper products.

Skaneateles, N. Y.—The Delavan Corrugated Box Company has been incorporated with a capital of $20,000, to manufacture corrugated paper boxes and containers. The incorporators are N. H., B. H., and A. B. Delavan. The company is represented by MacDonald Brothers, Seneca Falls, N. Y.

Baltimore, Md.—The Atlantic Bag Company, 2353 Boston street, has been incorporated with a capital of $100,000, to manufacture paper bags and other containers. The incorporators are John S. Connor, John G. Thomas and Charles V. Waterfall.

Financial

North Tonawanda, N. Y.—The Rand Kardex Bureau, Inc., a Delaware corporation, manufacturer of paper specialties, etc., has arranged for an increase in capital from $100,000, to 215,000,000, for general expansion, and the acquisition of other properties.

Philadelphia, Pa.—George Winterer has been appointed receiver for the Ridge Avenue Wall Paper Company, 1511 North Twenty-first street, in bond of $10,000.

Chicago, Ill.—The Gaw-O'Hara Envelope Company, 504 North Sacramento Boulevard, has arranged for an increase in capital from $250,000 to $350,000 for general expansion.

New York, N. Y.—The General Bank Note Company, 1931 Broadway, has arranged for an increase in capital from $25,000 to $50,000, for general expansion.

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor
Member A. B. C. Audit Bureau of Circulations
Vol. LXXXI New York, November 26, 1925 No. 22

WORK OF THE PAPER DIVISION

The past year was one of active expansion in the paper trade of the United States, and it was marked by a gradually growing interest in foreign markets for American paper products, says the Director of the Bureau of Foreign and Domestic Commerce in his annual report. Discussing the work of the Paper Division of his bureau in some detail he continues:

The actual number of inquiries, relative to markets for paper and conditions influencing them, answered by the bureau during the year was 17,518.

Many concerns manufacturing flat papers as well as paper specialties, such as drinking cups, paper dishes, boxes of all sorts, cores, papeteries, envelopes, etc., were actively assisted in finding markets abroad for their products. They were constantly kept informed as to changes in market conditions, trade customs, and other particulars.

During the year there was a gradual abatement of many of the difficulties experienced by them in 1924, owing to increased costs in the mills of our principal competitors, and the American paper trade was kept fully informed as to these changes.

Strikes and the ensuing increases in wages in northern Europe, together with a distinct rise in costs of raw materials, lessened competition for American papers in several foreign markets. Improvement in business conditions at other points in many instances permitted American products to compete on the basis of quality alone, where previously there had been no potential market whatever.

A detailed investigation of markets abroad for printing machinery and accessories, as well as for printing inks, was begun. Part of the results have been distributed to those interested in the export of these items.

In addition, a comprehensive survey of the pulp and paper resources, production, and trade of each of the world's paper-producing countries was begun. Some of the results of this survey have likewise been published, although it will not be completed for several months.

Closer contacts have been established with the Forest Service and the Bureau of Standards in an endeavor to supplement the sources of information available to concerns and individuals with special or technical problems to solve.

A special effort was made to help a number of concerns entering export markets to make suitable connections, and they were aided also by the division's investigation of possible markets for their products.

Among these was a Pennsylvania company which has developed a $10,000 business almost solely through the bureau's services. By that means an order for 600,000 fiber spoons was obtained from one concern in London alone, with the possibility of additional orders in the near future.

A Philadelphia company was assisted by an investigation of foreign prices for printing inks, and markets were investigated to an extent that permitted a considerable expansion in this firm's foreign business.

Although not measurable in dollars and cents, definite assistance has been given paper exporters through a Glossary of Paper Terms definitely fixing the tariff classification of practically all paper items entering into American export and import trade. This has been given wide distribution.

A saving of several thousand dollars was effected for a St. Louis paper concern, which would have entered the Canadian market with adverse results but for an investigation of conditions by our Canadian office.

During the year 109 articles prepared by the paper division appeared in Commerce Reports, one trade information bulletin was published, 85 special circulars were released, and a new service in the form of a weekly news letter to the trade was instituted.

In these letters have appeared 382 items of immediate interest to the trade. All of these have also appeared in one form or another in trade magazines and newspapers throughout the country.

THE POWER SHOW AND PROGRESS

The National Exposition of Power and Mechanical Engineering, now approaching its fourth annual showing during the week beginning November 30 is arousing great interest in the paper industry. The number and diversity of exhibits will be greater than ever before. The entire three floors of the Grand Central Palace will be filled with displays of 400 exhibitors. The demand for tickets is evidence that the record of 80,000 visitors set at the 1924 Show will be exceeded.

The Power Show will demonstrate tremendous strides in the development of power generating and distributing equipment that are constantly being made. These rapid advances, represented by new devices and new developments, are making difficult the task of the designer who is urged on by the increasing demands for more power and who is faced by the fact that the plant he is designing today will be out of date when completely built two or three years from now.

New materials are required to stand the rigorous conditions of the modern steam plant and they require painstaking chemical, metallurgical and physical research into their properties. New forces must be controlled and new demands met. If the life of the world were represented by twenty-four hours, the development during the preceding second may be estimated as forty times greater than during the entire twenty-three hours and fifty-nine seconds preceding.

Some appreciation of this is necessary if the true value of the Power Show is to be understood. The great industries which use power either as electricity or as heat regard the show as one of the practical ways by which they can be kept up-to-date with the many new features that are constantly being brought out to increase the economy of generating power.

Power Show to Feature Worthington Exhibit

At the forthcoming Power Show, to be held at the Grand Central Palace, New York, November 30 to December 5, the Worthington Pump & Machinery Corporation intends to exhibit the cylinder, piston and piston rod, and spray valve of their new double-acting two-cycle Diesel Oil engine. This engine, built for the Shipping Board, has been in operation on a thirty-day non-stop run under Government supervision and several ten day and longer period runs, totalling 1,300 hours, or 7,375,000 revolutions under full load, without any replacement or repairs. The cylinder, piston and piston rod show practically no wear, as a result of the splendid design of this engine. Other machinery exhibited will be:

A 4" Worthington type OS horizontal split-case volute centrifugal pump mounted on bedplate with 7½ motor direct connected with flexible coupling between pump and motor. This is Worthington standard design of medium pressure centrifugal pump, and the particular size to be exhibited is rated at a capacity of 200 to 600 GPM on heads from 12 to 110'.

An 11 x 12 single horizontal belt driven air compressor with idler, will be shown. This is a standard Worthington Feather valve compressor of normal rated capacity with 350 cubic feet displacement per minute.

A 3½ x 4 Laidlaw vertical Feather valve compressor will also be featured. This is the standard vertical machine for operation at any speed up to 550 RPM, and suitable for air pressure up to maximum of 250 lbs. square inch. It is also adaptable for vacuum service.

A 4 x 6 Deane pattern vertical triplex single acting power pump will attract much interest. This pump will illustrate Worthington design and assembly for their line of triplex power pumps generally. It is of the so-called built up type with separate frames, cross head guides, plunger barrels, valve chests; adjustable crosshead shoes and adjustable connecting rod boxes, and can of course be fitted with single or double reduction gears of spur, single helical or Herringbone type. The normal rating of the pump to be exhibited is approximately 50 GPM.

A 6 x 4 x 6 Worthington standard duplex piston pattern boiler feed pump will also be displayed. This pump is specially typical of Worthington standard boiler feeder so well known everywhere. This particular size is rated for approximately 460 boiler horsepower. It is good for 200 lbs. working pressure. There will also be on display a water meter and an oil meter.

Worthington representatives who will be in attendance at the Power Show are: C. W. Rice, in charge, H. L. Conklin, E. W. Hammond, K. F. Bernard, J. H. Messerly, C. K. Hood, R. H. Lloyd and F. W. Hankins.

Botfield Co. to Exhibit at Power Show

At the Fourth National Exposition of Power and Mechanical Engineering at Grand Central Palace, New York City, November 30 to December 5, the Botfield Refractories Company, Philadelphia, Pa., will exhibit, in Booth 567, a number of examples of unusual fire brick construction laid up with Adamant Fire Brick Cement.

In addition, interesting data on the service of Adamant-laid brickwork and original photographs of installations at well-known plants, will be on display. Among the Botfield Refractories Company representatives in attendance will be L. B. Botfield, Axel H. Engstrom, C. C. Phillips, W. B. Smith, A. J. Wittwer and J. J. Sweeney.

Box Board Production for September

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1925.—The Department of Commerce announces September figures on the operations of box-board manufacturers, based on reports of 89 firms operating 111 plants. The capacity data in the following table vary according to the normal number of working days in each month, Saturdays, Sundays and holidays being excluded, since the five-day week was adopted by about 80 per cent of the mills.

Year and Month	Operation			Production			Orders received	Unfilled orders (end of month)
	Inch hours		Per cent of capacity	Tons		Per cent of capacity		
	Capacity	Operated		Capacity	Output		Tons	
1924								
July	8,360,484	7,174,718	85.8	197,186	164,762	83.6	186,259	105,009
August	7,960,302	7,973,129	100.2	185,619	183,570	98.9	202,919	122,927
September	7,960,302	8,036,712	100.9	185,619	188,669	101.6	168,299	103,056
Total (9 mos.)	81,140,388	72,733,538	89.6	1,894,274	1,606,933	84.8	1,611,629	.....
1925								
January	7,960,302	8,388,897	105.4	185,619	199,633	107.5	199,649	112,911
February	7,600,440	7,550,968	99.3	177,320	177,292	100.5	162,724	100,403
March	8,360,484	7,569,995	90.5	197,186	179,067	91.0	169,924	90,062
April	8,360,484	7,654,378	91.6	197,186	185,866	94.3	169,914	79,127
May	7,980,462	7,111,776	89.1	188,223	163,956	87.1	175,246	83,415
June	8,360,484	7,983,150	95.5	197,186	190,310	96.5	193,564	92,022
July	8,740,506	8,272,036	94.6	206,149	196,522	95.3	216,013	111,919
August	7,980,462	8,012,001	100.4	188,223	195,527	103.9	210,385	119,248
September	7,980,462	8,152,403	102.2	188,223	198,761	105.6	191,840	109,191
Total (9 mos.)	73,324,086	70,695,604	96.4	1,725,315	1,686,934	97.8	1,689,259	.....

Year and Month	Shipments of boxboard	Stocks of boxboard end of month	Consumption of waste paper			Stocks of Waste Paper (end of month)		
	Tons		Tons		Per cent of capacity	On hand	In transit	Unshipped purchases
			Capacity	Consumed		Tons		
1924								
July	166,664	50,366	184,778	158,734	85.9	165,802	16,939	34,870
August	184,941	48,935	175,938	181,752	103.3	161,793	17,002	34,919
September	191,203	46,401	175,938	182,521	103.7	172,240	15,319	41,766
Total (9 mos.)	1,605,162	.....	1,793,354	1,532,897	85.5	.....	.....	.....
1925								
January	195,501	52,466	175,938	193,285	109.9	172,382	18,846	34,974
February	176,101	53,960	167,910	170,023	101.3	172,456	16,635	27,110
March	180,418	51,835	184,778	170,363	92.2	176,035	13,199	22,948
April	179,772	57,212	184,778	170,487	92.3	172,223	14,307	32,590
May	168,353	53,327	176,379	159,095	90.2	174,726	12,686	26,129
June	184,928	59,452	184,778	179,953	97.0	166,467	13,872	25,246
July	190,667	64,600	193,177	184,295	95.4	160,099	11,953	34,358
August	203,766	55,560	176,379	187,301	106.2	149,984	14,598	29,761
September	202,238	52,072	176,379	187,620	106.4	155,476	13,866	35,721
Total (9 mos.)	1,681,744	.....	1,620,496	1,602,422	98.9	.....	.....	.....

News Print Destroyed by Fire

[FROM OUR REGULAR CORRESPONDENT]

ST. LOUIS, Mo., November 21, 1925.—News print paper valued at $80,000 was destroyed by a fire which burned the Wabash Railroad freight depot No. two at Carr and Collins streets, November 14. Fifteen carloads of paper belonged to the St. Louis *Post-Dispatch* and an equal amount was the property of the St. Louis *Globe-Democrat*. The news print was covered by insurance.

There were 1,000 tons of news print in the depot at the time of the fire. This paper, costing $70 a ton at the mills, costs about $80 delivered in St. Louis. The paper had been stored in the depot by the Perkins Transfer and Forwarding Company, which company has the contract to handle stock for St. Louis newspapers. The burned depot is used principally for the storage of paper and but a small quantity of other freight was in the building at the time. A general fire alarm brought out all fire apparatus and while the salvage corps made an effort to roll out the paper, it proved too cumbersome and was destroyed.

Heating and Ventilating at the Power Show

S. E. Dibble, president of the American Society of Heating and Ventilating Engineers, is to deliver a lecture on Recent Progress in Heating and Ventilating Equipment at the Exposition of Power and Mechanical Engineering to be held in the Grand Central Palace next week. The splendid showing of heating and ventilating equipment to be made at the show promises to prove a great attraction.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

Committee on Training Hold Important Meeting

An important meeting of the Committee on Training in the Industry, Technical Association of the Pulp and Paper Industry, was held in the Ten Eyck Hotel, Albany, N. Y., October 23, 1925. The meeting was called to order at 10 A.M. by Chairman Griffin, with the following members present: M. L. Griffin, J. A. Moyer, R. T. Haslam, J. O. Mason, H. F. Obermanns, L. M. Yoerg, H. G. McDowell, and C. E. Libby.

Introductory remarks were made by Mr. Griffin, in which he explained the purpose for which the committee was appointed. He stated that the committee should carry on the work of the Committee on Vocational Education which it succeeded, especially in encouraging the establishment of correspondence and class instruction among the workers in the pulp and paper industry. He spoke of the work which had already been organized under the direction of the Extension Division of the University of Wisconsin, the Institute of Industrial Arts, and the Division of University Extension, State of Massachusetts. He asked Doctor Moyer to explain the work of the last institute.

Massachusetts University Extension

Doctor Moyer gave a synopsis of the work organized by the Division of University Extension in the State of Massachusetts. He stated that class work was well under way in his state with a class of 100 men already organized in Holyoke and a class of 60 men in Dalton. He spoke of the difficulties which some men encountered in the elementary work, especially with the subject matter contained in the first two volumes of the vocational textbooks. He stated that they advised all of their students who did not have a high school education to get some elementary training in fundamental subjects in the evening high schools of the state. Doctor Moyer stated that they would like to get the vocational textbooks, *Manufacture of Pulp and Paper*, split up into small paper covered pamphlets containing about 100 pages each as this would greatly benefit those men who could not readily afford to purchase an entire cloth bound volume at one time. Mr. Griffin promised to take up this matter with the publishers of the textbooks and see what could be done toward obtaining these small pamphlets.

Hammermill Paper Company Plan

H. F. Obermanns described the educational work being carried on in the mills of the Hammermill Paper Company. He stated that this mill had a training class for foremen which was organized and directed by the Pennsylvania State Department of Education. He also stated that 38 men in their mills had registered for courses with the Institute of Industrial Arts, four of whom had already completed the course, one of these four being the first man to complete the entire course offered by the Institute. The local high schools, under the supervision of the State Department of Education, had organized classes for teaching the work covered by the first two volumes of the vocational textbooks. Mr. Obermanns stated that arrangements had been made whereby the tuition charges for the correspondence courses were paid directly by the company and deducted from the weekly pay envelopes of the men. When a man completed the course satisfactorily the company refunded the entire cost of tuition. It was Mr. Obermanns' opinion that one of the greatest problems which had arisen as a result of the correspondence courses was that of showing a proper appreciation on the part of the mill for the efforts of those men who completed the courses. His mill attempted to do this by promoting the men to better positions or if no other position was available the man's wage rate was increased.

Pusey and Jones Company

H. G. McDowell stated that the Board of Education of Wilmington, Del., provided classes for boys in the plant of the Pusey and Jones Company, who were interested in the study of paper making. The results to date indicated that boys who had had a high school education were much more successful in completing the work of the course than those who had not had such opportunities.

Laurentide Company

J. O. Mason described the methods employed in training men in the mills of the Laurentide Company. He stated that most of their employes were French Canadians without much fundamental education and for this reason the introduction of technical training courses had been rather limited. Practically all of their foremen were trained by actual experience in the various mill operations. Mr. Mason expressed the opinion that if the mills could obtain men with the proper fundamental education it would be a relatively simple matter to teach them the special processes of pulp and paper making.

Massachusetts Institute of Technology

Professor R. T. Haslam gave a brief synopsis of the chemical engineering curriculum at the Massachusetts Institute of Technology with special reference to the work of the fifth year which the student spends in residence at several industrial plants where he is given the opportunity of making direct application of his engineering knowledge in special plant tests and investigations. Two months of this time are spent at the plant of the Eastern Manufacturing Company, South Brewer, Me., and other mills in this district. Professor Haslam stated that the Institute course was a general course in chemical engineering which emphasized fundamentals and did not attempt to train men for any particular industry. He stated that many graduates of the course entered the paper industry but had a tendency to remain unsettled for a few years and finally to desert paper making for some other in-

dustry. While the Massachusetts Institute of Technology gave no instruction in paper manufacture and had not planned to do so, it was Professor Haslam's opinion that such courses might be organized if there was a sufficient demand for them and the opportunity was presented of being of more service to the paper industry.

American Writing Paper Company

L. M. Yoerg spoke of the difficulties encountered in the employment of high school graduates or college men in fine paper mills owing to fluctuating business conditions which made it impossible to offer them continuous employment. He described the vocational class now being conducted in Holyoke under the supervision of Miss Helen U. Kiely. He believed that the work covered by the vocational textbooks could be presented successfully only as class work under the supervision of a competent instructor. Mr. Yoerg agreed with Doctor Moyer that the subject matter in the first two textbooks was presented in a way which made it much too difficult to be understood by the average mill man who had not had a high school education. Doctor Moyer suggested that the committee take some action relative to obtaining a revision of Volumes I and II of the vocational textbooks. Chairman Griffin appointed Doctor Moyer and Mr. Yoerg to a committee to formulate a request to have Volumes I and II of *The Manufacture of Pulp and Paper* series revised with the object of simplifying the subject matter to an extent that they may be more readily understood by the average mill employe.

New York State College of Forestry

Professor C. E. Libby described the college course in pulp and paper making offered by the New York State College of Forestry. He stated that the course was essentially a course in chemical engineering in which the specialized courses dealing with the various chemical industries had been deleted to allow the substitution of fundamental courses in Forestry, Wood Technology, and the specialized courses in Pulp and Paper Manufacture. About 90 per cent of the graduates of the course entered the paper industry and remained there. He stated that one of the big problems faced by the college consisted in locating mills where the students could obtain good practical experience during their summer vacations. Another problem consisted in formulating, in cooperation with the mills, a program of training which would attract graduates of the course to operating positions in the mills rather than to the technical laboratory positions. Professor Libby stated that while the college was not giving any correspondence or class work in paper making for mill employes, it would be willing to do so if funds could be secured for financing such work. He mentioned correspondence with the Department of Education of the State of New York relative to obtaining financial support for such a program but stated that nothing definite had resulted from these negotiations.

Chairman Griffin appointed a sub-committee consisting of Mr. Obermanns, Mr. Yoerg and Mr. Mason to formulate a suitable program of training for young men entering the paper industry with the object of learning the operations and preparing for executive positions.

Doctor Moyer desired to determine how many men had registered for the three extension courses and the secretary was instructed to secure this information from the various organizations giving such instruction and to check it by a canvass of the larger mills having men enrolled in these courses.

Institute of Industrial Arts

T. L. Crossley, representing the Institute of Industrial Arts at Gardenvale, Quebec, Canada, visited the session of the committee and explained the work of this institution in giving correspondence instruction in pulp and paper manufacture. Approximately 750 men had enrolled in the courses offered by this institute. About 200 of these enrolled students had already discontinued the courses without completing them. The institute has had students complete the course in 13 months. Some mills request that their men be given the privilege of discontinuing the work without further payment on completing a section of the course. This privilege is always granted; in fact the institute does not attempt to forcibly collect fees from students in any case, notwithstanding the fact that each student signs a legal contract. The Institute furnishes its instruction data to the students either in paper bound pamphlets containing one seciton of the course, or in the cloth bound, five volume sets.

Chairman Griffin appointed Professor R. T. Haslam and H. G. McDowell to act as a committee to formulate a procedure for handling requests for technical information such as those frequently propounded by correspondence school students, the object being to standardize the routine for answering such questions and to arrange a distribution of the questions and replies in such a way that they might benefit the industry at large.

Mr. Griffin proposed that each of the agencies offering correspondence school instruction be requested to furnish the committee with a complete set of its instruction sheets and examination questions. The secretary was instructed to secure this information.

Standards for Paper Towels

The Bureau of Standards recently completed an investigation having for its object the development of specifications for purchase of paper towels by Government departments. The cooperation of manufacturers and consumers was secured, and a wide range of products covering all grades available was tested.

The basic raw materials used in paper toweling range from fibers produced by repulping waste papers and containing a large constituent of groundwood fiber, up to fibers produced entirely by chemical processes and using special modifications designed to impart the peculiar properties desired.

The properties of prime importance are absorbency, strength, and cleanliness. As the natural softness and absorbency of wood fibers are considerably lessened by the usual treatment given to develop strength, the maximum quality in both these respects is difficult to obtain. The higher-grade products have these two desirable qualities combined, but considering the price differential, unless economy in use can be assured, towels possessing a medium degree of both absorbency and strength are considered satisfactory.

Test methods for determining quality were studied. A method was evolved for determining absorbency, consisting of placing 0.1 cc. of water on the surface and noting the time required for complete absorption. The bursting test is considered suitable for measuring strength.

There is lack of uniform practice as regards size, basis for expression of weight, unit of purchase, and unit of packaging, and adoption of standards in these respects would be beneficial to all concerned. The bureau makes the following recommendations: Size, 11 by 13 inches; basis of weight, 25 by 40,500; unit of payment and of packaging, 1,000.

The minimum quality of towels acceptable for general use should fall within the following limits: Weight, not more than 42 pounds (25 by 40,500); absorption time, not more than 180 seconds; bursting strength, not less than 8 points.

British Wood Pulp Importations Decline

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—With exception of wet mechanical groundwood, importations of wood pulp into Great Britain during the first nine months of 1925 were less heavy than during the same period of the preceding year. The total receipts of chemical pulp dropped from 331,086 tons (long ton of 2,240 pounds) to 330,927 tons, and dry mechanical groundwood from 10,481 tons to 4,884 tons. Imports of wet mechanical groundwood, which comprise over 60 per cent of the shipments, reached a total of 537,009 tons, an increase of 11,386 tons over the same period in 1924.

Venturi Circulator and Separator as Applied to Paper Machines*

By J. O. Woodsome

Paper drying is a manufacturing process too complicated to master in detail within a period of a few years, considering the many grades and variety of paper made. To experiment, to tear apart and reasonable equipment, requires a great deal of money as well as time and courage, and it is a class of work that can only be undertaken by a few mills, or by large manufacturers of paper mill equipment. As the period of 15 minutes granted to speakers rather limits this talk, it occurs to me that a review of the past experimental work might bring forth important information leading to definite conclusions—and showing that actual progress has been made in this important art, as well as indicating what may be expected within the near future.

In 1907 special experimental work was undertaken by an eastern board mill, which resulted in a system of piping, whereby driers could be used at the wet end as condensers, to secure circulation of steam through the driers on the machine. This system of steam circulation produced an increase in drier efficiency and created new standards of performance which were not exceeded until the introduction of a duct system supplying fresh heated air to the surface of the board as it passed through the machine. The system of piping perfected in this eastern board mill is in popular use today, and the advantages obtained from circulating the steam through the driers is now well known to those familiar with the art of paper drying.

At a later period and in a Middle-West kraft mill, this system of piping, perfected in the board mills, was applied to a kraft paper machine and further improved by dividing the machine into several sections and including differential regulating valves to secure a gradual uniform dried sheet for improved quality and pop test. Again, the results obtained in this mill justified all experimental work expense and piping systems graduating the temperature of the several groups of driers are largely in use today on all classes of paper machine.

Soon after this period just mentioned, in a Far Western Canadian mill I was permitted to carry on some experimental work to determine the proper location for supplying the exhaust and live makeup steam to the machine header, to determine whether the point of admission of this steam had any influence on the breaks, which were occurring while the paper passed through the driers. In this particular news print machine, it was found to be of decided advantage to feed both the exhaust and live steam makeup into the header at the dry end of the machine, as a material gain in machine speed was obtained and paper breaking between the driers was practically eliminated.

The experimental work done on a machine drying sulphite in an eastern mill, is of sufficient value to mention here, for after a series of tests, it was proven that temperature graduation would produce a higher rate of drying and a better quality sheet than when dried with all driers at constant temperature, or with even higher temperatures at the wet end.

The question as to whether water could accumulate and form a solid ring on the inside of the drier shell was satisfactorily proven in a series of experiments carried out on a fast running new machine, and it was demonstrated that the vaporous condensate mists falling to the bottom of the drier were immediately picked up and carried around the drier eventually forming a solid ring of water of considerable weight, depending upon the peripheral speed of the drier. In a definite period of time, and eventually be taken out through the syphon.

The Penberthy Injector Company was called upon to produce an ejector with sufficient capacity and suction power to divert the vaporous mist and water of condensate into the syphon pipe to prevent the formation of this ring of water at any drier speeds well above 1000 feet per minute and they succeeded in producing a high grade article for this class of work.

Late experimental work with air indicates that air drying will come into more general use in the near future.

Heat recovery systems, such as manufactured by the J. O. Ross Engineering Corp., provides an abundance of heated fresh air from waste heat that can be profitably used to heat the machine room and for drying paper.

Machine room and paper machine ventilation, uniform air temperature and quality to maintain Summer drying conditions, steam and its correct use, records maintained on machine performance and conditions, drier canvas and its correct use, open machine pits versus hoods, cross ventilation and many other factors affecting proper drying will soon be given careful consideration, as the ever mounting cost of fuel, labor and all material which enters into the manufacture and production of paper will demand exact information, so that suitable provision can be made to correct or counteract their influence.

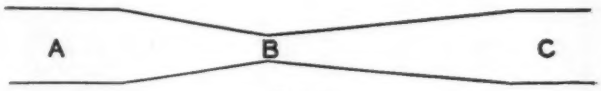

FIG. 1

Before closing this talk, I would like to give a brief explanation of the Penberthy Venturi Circulator and Separator, lately developed for paper machine driers by the Penberthy Injector Company, Detroit, Mich.

Mechanical Pumps

The mechanical pumps of piston and rotary type, steam and motor driven in common practice for handling air, steam and hot condensate, are being rapidly replaced by jet pumps. This industrial trend is well illustrated by the rapidly growing use of jet pumps in condenser work.

Other contributing factors to the popularity of the jet pumps are their freedom from moving parts and lubrication, their compact form, low maintenance cost and their ability to utilize a greater amount of heat.

Bernoulli Theorem

The Bernoulli Theorem states that the total head of a flowing liquid at any point in its stream line is equal to the total head at any other point provided undue friction and work has not intervened.

The total head in pipe A (Fig. 1) (the sum of static and velocity heads) will be the same as the total head at throat B, because what disappears in the form of static head reappears as increased velocity head, hence the total energy is unchanged.

Venturi in 1797 discovered that this increase of velocity head at the throat B also created a "sucking action" or pressure reduction head at B, but no use had been made of this principle for remov-

* Paper presented at the Fall Meeting of TAPPI, at Kalamazoo, Mich., Oct. 14-15, 1925.

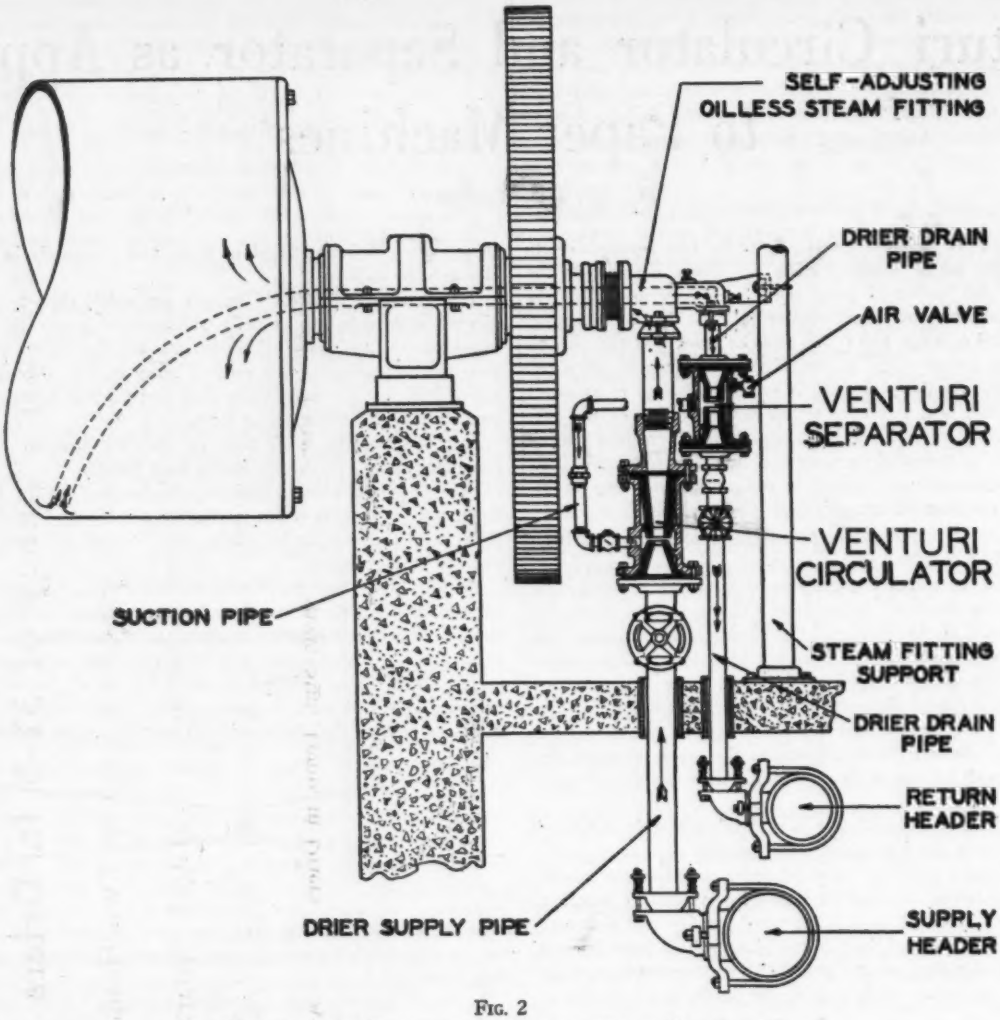

FIG. 2
JET CIRCULATOR AND SEPARATOR AS APPLIED TO PAPER MACHINE DRIERS

ing water from paper machine driers until the present Venturi circulator was developed.

The Venturi circulator is an improvement over the ejector for removing water and air from paper machine driers in that no auxiliary steam is required to secure a suction.

The normal amount of steam condensed in each drier furnished ample steam flow through the Venturi to remove all water and air and provides a simple means of securing individual drier control.

The Venturi circulator is installed in the drier supply pipe, as shown in illustration, and any flow of steam to the drier produces a suction at throat gap. This suction is transmitted through connecting pipe to Venturi separator, installed in drier drain pipe as illustrated, causing water, air and steam to be forced from drier into separator.

The velocity head obtained in the separator carries the water into the drain pipes and return header. Air is released from the separator chamber to atmosphere through the automatic air valve. Any air that is carried with the water into the return header is taken out in the usual manner.

The size and type of throat fitted to separator will influence to a great extent the efficiency obtained from the drier, which is excellent in the drying of news print, as the driers at the wet end of the machine are maintained at higher surface temperatures, quickly shrinking the sheet to eliminate calender slits and to obtain a better surface finish. (Fig. 3).

Test on Penberthy Circulator and Separator, showing Drier Surface Temperature Taken at Different Periods During the Day

DRIER SURFACE TEMPERATURE

Drier No.	1	2	3	4
Wet End	1 A.M.	3 A.M.	9 A.M.	10 A.M.
1	212° F.	189° F.	185° F.	176° F.
2	201	190	186	175
3	229	218	209	178
4	236	219	219	160
5	212	228	217	186
6	220	218	216	173
7	210	225	210	200
8	222	223	226	172
9	222	228	213	192
10	224	224	219	210
11	226	224	212	198
12	226	228	225	214
13	232	220	214	205
14	231	217	216	207
15	213	209	201	208
16	226	218	211	191
17	225	221	212	197
18	222	218	217	193
19	223	228	216	205
20	226	214	215	204
21	229	222	211	212
22	210	222	218	204
23	227	215	202	213
24	223	228	211	210
25	231	223	228	212
26	234	232	219	212
27	223	236	209	221
28	220	228	216	218
29	230	234	223	222
30	223	228	211	215
31	231		220	214
Average	223.4	221	212.8	200

Average for four tests 214.4
Average temperature of steam in driers ..... 240° F.
Copper constantan couples and a Leeds-Northrup Potentiometer used to secure drier surface temperature.

TECHNICAL SECTION, PAGE 214

Test to Record Efficiency of 31-5 ft. Driers Drying 32 lb. Newsprint

TEST NO. 1

Driers Operated on Regular Two-Header System

TEST NO. 2

Driers Fitted with Penberthy Venturi Circulator. Separator Throats All One Size

TEST NO. 3

Separator Fitted With Small Throats on Driers at Dry End Graduated to Larger Size at Wet End.

	Speed of Paper	Avg. Stm. Temp. in Driers	Avg. Drier Surf Temp.	Efficiency of Driers
Test No. 1	670 ft. min.	240° F	166° F	61.4%
Test No. 2	705 ft. min.	243° F	198.9° F	82.2%
Test No. 3	673 ft. min.	250° F	206.4° F	82.5%

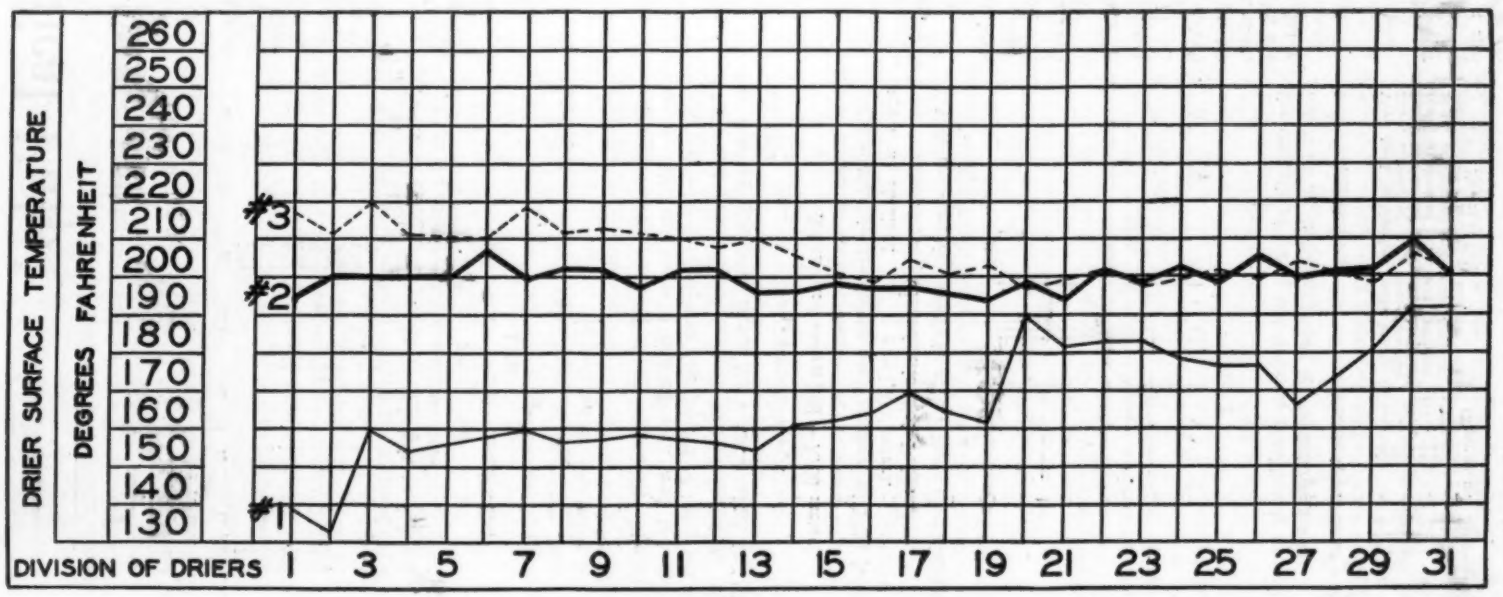

FIG. 3

New Method of Determining the Strength of Chemical Pulp*

By P. M. Hoffmann Jacobsen

Determination of the Zero-Breaking Length

The zero-breaking length is determined either on the pulp sheets as received from the pulp mill, or on hand made sheets prepared without any beating whatever. Two strips 100 x 5 mm. are first cut, one in the machine direction and the other in the cross direction, and weighed together. If p is the combined weight of the two strips, the weight per square meter is 1000p. The strips are then cut into pieces 8 mm. long, and these 8 x 5 mm. strips are tested in a Schopper tensile strength tester, the jaws being brought right up together. The breaking load can be denoted by P.

This load is a function of the weight of the sheet, and in order to allow of comparisons it is useful to calculate the breaking load

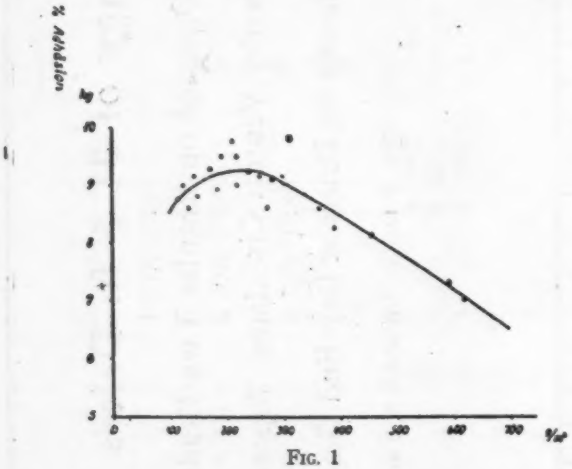

Fig. 1

for a sheet weighing 300 g. per sq. m., which weight has been adopted as standard. But this cannot be calculated as a matter of simple proportion (0.3 P/p); for experiments have shown that the calculated values differ somewhat from the true values as is clearly brought out in the graph (Figure 1).

(Ordinates $-\frac{0.3P}{p}$; abscissas—weight of paper in g. per sq. m.)

It is therefore necessary to apply a correction factor, K, which varies according to the weight of the paper. So that when we know the tensile strength P of a sheet weighing 1,000p g. per sq. m., and the correction factor Kx corresponding to that weight, the tensile strength which the sheet would have if it weighed 300 g. per sq. m. can be calculated from the expression

$$\frac{0.3}{p} \times P \times Kx$$

The author has determined the value of this correction factor Kx for jaws in which a = 28 mm. (Figure 2), and obtained the results tabulated below. Better results were obtained with a special jaw in which a = 12 mm. instead of a = 28 mm. For example the coefficient K for a 620 g. sheet was 1.27 with a = 28 mm., while for a = 12 mm. it fell to 1.18. It would be preferable, therefore, to use the special jaw in the future.

G. per sq. m.	K	G. per sq. m.	K	G. per sq. m.	K
100	1.06	325	1.02	550	1.19
125	1.03	350	1.03	575	1.22
150	1.01	375	1.05	600	1.25
175	0.99	400	1.06	625	1.28
200	0.98	425	1.08	650	1.31
225	0.97	450	1.10	675	1.34
250	0.98	475	1.12	700	1.38
275	0.99	500	1.15		
300	1.00	525	1.17		

From the tensile strength of the paper weighing 300 g. per sq. m., it is easy to find the zero-breaking-length, as follows:

Since the strip is 0.005 m. wide, we have

$$0.005 \times R \times \frac{300}{1{,}000} = \frac{0.3}{p} \times P \times Kx,$$

whence

$$R = 200 \times \frac{P}{p} \times Kx$$

Example

Suppose we have a sheet of pulp (unbeaten) weighing 425 g. per sq. m. We cut strips 5 mm. x 8 mm., and test them in the Schopper with the jaws touching, instead of being 180 mm. apart.

We find an average strength of 15.2 kilos, and the table shows us that the correction factor for a 425 g. sheet is 1.08, so that we have

$$R = 200 \times \frac{15.2}{0.425} \times 1.08 = 7.730 \text{ meters.}$$

On making the test in the usual manner, with the jaws 180 mm. apart, we obtained r = 1,000 meters.

Classification of Pulps

This zero-breaking-length is a very interesting characteristic of

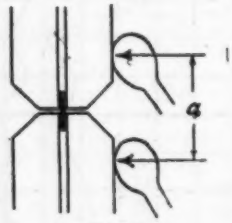

Fig. 2

the strength of pulps, and it varies considerably according to the nature of the latter, as shown by the following table.

Nature of Pulp	G. per sq. m.	Bulk*	Mean Zero-Breaking-Length R (in meters)
Very hard, unbleached, soda kraft	620	0.100	14,000
Hard, unbleached pulp from coniferae	420	0.148	7,730
Hard, unbleached pulp from coniferae	425	0.160	7,730
Hard, unbleached pulp from coniferae	445	0.101	7,600
Hard, unbleached pulp from coniferae	285	0.144	7,400
Ordinary unbleached pulp from coniferae	434	0.150	6,400
Soft pulp from deciduous trees	355	0.145	4,600

*The bulk is expressed as the thickness (in mm.) which the sheet would have had if it had weighed 100 g. per sq. m.

*Translated from *Le Papier* xxviii, 877-880, August 1925, by A. Papineau-Couture.

Application of the Method in Foretelling the Strength of Paper

The zero-breaking-length is a measure of the absolute strength of the unbeaten pulp. This strength changes during the beating operation on account of two factors which act in opposite directions, namely, hydration of the fibers, a chemical phenomenon which improves the strength, and deterioration or breaking down of the fiber wall, a physical phenomenon which reduces the strength.

Under this twofold influence, the absolute strength of the pulp varies as shown in Figure 3; it first rises quite rapidly as beating proceeds and the length of the fibers is reduced, and then falls again slightly after having reached a maximum.

So that in order to be able to foretell the strength of the paper which will be obtained from a given pulp of which we have determined the zero-breaking-length, we must first find what effect beating will have on the strength of the pulp.

Let R be the zero-breaking-length of a pulp which is to be made into a given grade of paper. The zero-breaking-length, R_1 of the beaten pulp and of the paper can be obtained from R by means of a factor y:

$$y = \frac{R_1}{R}$$

which will depend on the beating to which the pulp is subjected for that particular grade of paper. For instance, y will be 1.3 for blotting paper, and 1.6 for glassine.

Knowing R and y we can find the zero-breaking-length of the beaten pulp, and consequently of the paper, as follows:

$$R_1 = R.y$$

But in order to find the tensile strength, r, of the paper in the ordinary sense of the word, i.e., as determined with a Schopper tester with jaws 180 mm. apart, the adhesion, a, of the paper must be taken into consideration; and we finally have:

$$r = R_1.a = R.y.a.$$

Example

A glassine mill wishing to determine the breaking length of the paper which will be produced from a given lot of pulp can proceed as follows:

The zero-breaking-length R is determined as described above, and is found to be, say 5,000 meters. It is known from experience that in beating stock for glassine paper the absolute strength is increased in the ratio of

$$y = \frac{R_1}{R} = 1.6$$

and hence the zero-breaking-length of the beaten stock will be

$$R_1 = R.y = 5{,}000 \times 1.6 = 8{,}000 \text{ meters.}$$

It is also known from experience that the adhesion of glassine paper averages 90 per cent under the ordinary testing conditions, so that the pulp under consideration should furnish a paper having a breaking length of

$$r = R_1.a = 8{,}000 \times \frac{90}{100} = 7{,}200 \text{ meters.}$$

Breaking Length of the Fibers Proper

The zero-breaking-length represents the breaking length which the sheet would have if all its constituent fibers adhered perfectly, so as to prevent all slipping between them. This characteristic, therefore, furnishes a means of measuring the strength of the fiber itself.

The author verified this by means of the following experiment: The tensile strength of a cotton thread was determined and found to be 19.4 kilos. The cotton was then cut into pieces 2 to 4 mm. long, softened in hot water, and made into paper, which was cut into 5 mm. strips. The average breaking load (in both directions) was 9.03 kilos, and the weight of a strip 10 mm. long was 0.098 grammes.

The breaking length of the fiber itself was therefore:

$$F = \frac{19{,}400}{0.98} = 20{,}000 \text{ meters, approximately}$$

Tests carried out on single cotton fibers showed a breaking length of 23,000 meters, which can be considered as very good agreement.

It should be noted that the average zero-breaking-load of the cotton paper, 9.03 kilos, was approximately equal to half the tensile strength of the fiber itself:

$$\frac{19.4}{2}$$

If we consider that the strength of the paper is due to only half the fibers of which it is made up—namely, those which are parallel to the direction in which the paper is tested—it will be

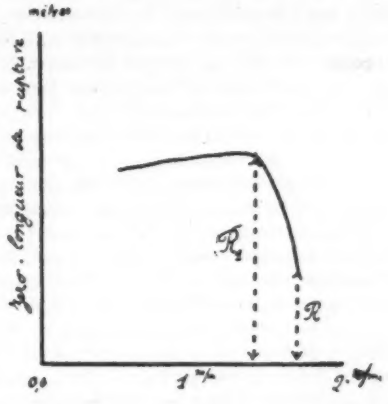

FIG. 3

seen that the zero-breaking-length of the paper gives a good approximation of the strength of the fibers themselves; which was exactly what the author wished to prove.

In the present instance the approximation was 6.9 per cent, so that the breaking length of the fibers is equal to 6.9 per cent more than twice the zero-breaking-length of the paper; i.e.,

$$F = 2R + 6.9 \text{ per cent.}$$

Connecticut Valley Superintendents Meet

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., November 21, 1925.—The semi-annual meeting of the Connecticut Valley Mills Superintendents' Association was held at the Hotel Nonotuck, Saturday night last, with dinner preceding, about 55 members attending.

The annual election of officers was held with the following result: Chairman, Charles Mooney, of Lee; First Vice Chairman, Charles C. Stewart, of North Wilbraham; Second Vice Chairman, Edward McDonald, of Holyoke; Third Vice Chairman, Silas Weiser, of New Haven; Secretary-Treasurer, Charles Tifft, of Holyoke; Members of the Board of Governors, William B. Clement, John J. White, Michael Kelly, Joseph Bario and Roger McCorkindale, all of Holyoke, and Thomas Rogan, of Fitchburg.

Thomas Rogan, of Fitchburg, presided, and John J. White was introduced by him as toastmaster for the evening. Edward Coughlin, of New Jersey, president of the National Association, spoke of matters concerning the association, and Sidney L. Willson, president of the American Writing Paper Company, of Holyoke, discussed business in general and the possibilities of its future development.

Norman Dash led the community singing and there were selections by the Art Male Quartet, consisting of Edward F. Gilday, Norman Dash, Arthur Lynch and John Cox. M. L. Cramer, of Holyoke, gave a series of magic and card tricks.

Standardization of Paper Testing Methods*

By B. W. Scribner, Chairman of the Paper Testing Committee

Through the work of the Paper Testing Committee during the past several years, many valuable test methods have been developed and these have been published by the Technical Association in its booklet, "Paper Testing Methods."

The value of this pioneer work in paper testing cannot be expressed directly in dollars and cents but there is no doubt that the unselfish and arduous labors of the members of the association who participated in it has contributed immense real value in actual dollars and cents to the American paper industry, aside from its value in contributing to our general knowledge of paper technology.

Test methods are a real necessity to any industry. The manufacturer must use them to control his various manufacturing operations and to insure that the final product will meet the demands of the consumer. The latter must of necessity use them to find if the deliveries received meet his requirements.

In merchandising any commodity, it is becoming generally realized that definite test basis for purchase is the most satisfactory basis, this tending to prevent delays, legal litigation and other annoying and expensive experiences common to transactions based on the personal judgment alone of the parties involved.

Aside from tests related to specific uses of papers, the usual tests required to determine the quality of paper have been quite thoroughly covered by the past work of the committee. It seems advisable, therefore, to confine the present work of the committee in the direction of finding what method of test shall be used for a given purpose and definitely defining the apparatus and procedure to follow in making the test. This program follows the recommendation made in the annual report of the Paper Testing Committee, April 11, 1922, Mr. F. C. Clark being the Chairman at that time. The following statement made in that report applies with equal force at the present time:

"It is believed that the Paper Testing Committee has arrived at a place where a change of policy is desirable. In the past, this committee has suggested and proposed various methods of testing, which, in its judgment, were of value in determining the quality of paper. It is thought advisable that the Technical Association authorize this committee to investigate the following subjects with the view of putting paper testing on a more scientific basis."

The subjects given cover practically the same general program as is being followed by your present paper testing committee.

A similar recommendation was made by the committee of the paper industry, which collaborated with the Bureau of Standards in its work on the technical standardization of paper. In its report published in the general report of this paper standardization work dated August 30, 1921, the following statement was made:

"2. DEVELOPMENT.—Paper testing has developed rather slowly in this country and many of the methods are of foreign extraction, as are some of the instruments and apparatus. However, a considerable amount of development has taken place and there are a greater number of methods now available. This development has not, however, been in any systematic manner and has been spread over the whole field of testing, to meet special conditions. A systematic study should be made and standard methods developed and used."

Even abroad, in England, we find the same need of standardization of Paper Testing Methods expressed in the very able address on paper testing given before the British Paper Technical Section by A. G. Rendall. (Paper Trade J. Aug. 27, 1925.)

The present confusing conditions in paper testing need hardly be pointed out as the numerous inquiries received by the Bureau of Standard asking advice as to what testing method or condition shall be used for various purposes, show that the need of more adequate specifications must be quite commonly realized.

Different laboratories are testing under different humidity conditions; weights are still expressed on various sizes, which in a great many cases are no longer used to any extent, and when a common basis of 25 x 40 inches, 500 sheets could be adopted with no hardship and would greatly simplify calculations; results of strength tests are expressed in both the metric and the English systems; and when it comes to choice of instruments for making a test there is an embarrassment of riches in many cases owing to the number of types available for the purpose.

It is obvious that to obtain agreement between different testing laboratories, definite specifications for making tests are required, and in order that we shall all speak the same language referring to tests, that common nomenclature and common methods of reporting results be adopted by the association.

What is sought for in our work is not only uniformity of practice but test methods that will stand the scrutiny of legal experts. Such methods are absolutely necessary before great progress can be made in adequately specifying paper quality. There is no doubt that in the near future paper shall be purchased generally on the basis of definite specifications of quality and performance and as such specifications must form the basis of legal contracts for paper deliveries, the test methods involved must be very carefully and thoroughly worked out. Even in the case of the simplest and best known testing methods, when it comes to adequately specifying each detail of the procedure to be followed, an immense amount of cooperative work is required. Results of lawsuits have been known to hinge on the position of a comma in data accepted as a part of the court records, therefore, extreme care must be exercised in specifying the methods. For this reason it is realized that progress must be rather slow. The methods as first recommended for the adoption may not be all that is desired but provision has been made for frequent revision and as defects are found in the light of actual use of them, they will gradually work toward the perfection desired.

It is hoped that you will give your support to this work whether actively engaged in it or not, as it is an effort to fill a real need in the Paper Industry.

* Paper presented at the Fall Meeting of TAPPI, at Kalamazoo, Mich., Oct. 14-15, 1925.

Proposed New Dam for Wisconsin River

The Wisconsin River Paper and Pulp Company, of Wisconsin Rapids, has informed the city authorities of that place that its proposed new dam will not violate any public rights, but will enable the company to develop more hydraulic power for the operation of its pulp mill and part of the paper mill.

A hearing has been ordered by the Wisconsin Railroad Commission on the company's application to erect the dam. It is intended to replace the old wooden crib dam. The new structure will be of concrete and will be equipped with tainter gates of the proper capacity to control the water in times of floods.

The water to be impounded will not be higher than the level of the present dam, it was brought out, but the structure will greatly improve water conditions in times of floods.

An employe of the Whiting-Plover Paper Company, near Stevens Point, Carl Paschak, suffered a fracture of the foot when a shaft fell upon it last week.

Paper mills are solidly behind the Fox River Valley Safety Conference to be held in Green Bay on December 3. It is expected that the convention may result in the formation of a local safety council for Green Bay.

Waste Liquor and Gases of the Paper Industry

Survey of the Recent Domestic and Foreign Patent Literature on the Utilization of Waste Liquors and Waste Gases of the Pulp Industry, 1912-1924

By A. Schrohe[1]

Translated, with additions, by Clarence J. West, Chairman Committee on Abstracts and Bibliography, T. A. P. P. I. (Contribution No. 47 of the Committee).

(Continued from last week)

277. 1915. U. S. 1,130,817. M. W. Hedden. Treatment of waste sulphite liquor.

In order to recover valuable constituents from waste sulphite liquor, it is neutralized with calcium hydroxide, digested with potassium cyanide to remove sulphur compounds and sodium chloride added to the remaining liquor to saturate it, at ordinary temperature, to precipitate organic cyanogen compounds.

278. 1915. U. S. 1,133,031. Rudolf Hutzler. Treating insoluble indigoid dyes.

Colloidal indigo is rendered soluble in water by passing air through a cold solution of a leuco compound of indigo mixed with waste sulphite liquor. Separation of the indigo from the solution is avoided by passing air through it very slowly.

279. 1915. U. S. 1,136,723. A. Schmidt. Non-explosive fungicide.

A non-explosive fungicide is prepared by mixing waste sulphite cellulose liquor with the sodium or other salts of dinitrophenol, dinitrocresol or similar nitro compounds.

280. 1915. U. S. 1,138,118. F. H. Kennard. Process of reducing waste sulphite liquor to a powder.

Waste sulphite liquor is reduced to a powder without substantially changing the composition of its constituents ,by first concentrating *in vacuo* to a viscous consistency at 96°C. and then evaporating to dryness in a thin sheet on a heated drum, also *in vacuo* at 57°C. (Also D. R. P. 289,601, Nov. 8, 1913.)

281. 1915. U. S. 1,139,507. Canadian 141,542 and 142,543 (1912). Apparatus for fermenting sulphite cellulose liquor.

The liquor is supplied centrally to a fermentation vat by a pipe, which is provided at its end with an extension having horizontal discharging arms of different lengths which rotate closely to the bottom of the vat, the ends being bent so as to discharge the liquor tangentially. The liquor is drawn off from the vat below the level of the spent yeast by means of a horizontal pipe provided with a valve to close its inner end, and with a vertical pipe extending upwards above the level of the healthy yeast and open at its upper end, so that, by means of two valved discharge pipes, either fermented liquor or spent yeast may be drawn off.

282. 1915. U. S. 1,140,127. J. A. DeCew. Wood preservative.

A composition for preserving wood is formed of a mixture of waste sulphite liquor, creosote oil and a soluble salt, such as zinc chloride.

283. 1915. U. S. 1,143,714. O. W. Knight. Process of treating sulphite waste liquor and products thereof.

A liquor containing a lignone derivative, *e. g.*, fermented waste sulphite liquor, in which at least part of the alcohol has been oxidized to aldehyde, is treated with a phenolic substance in the presence or absence of a condensing agent at a temperature sufficient to produce a condensation product.

284. 1015. U. S. 1,144,905. L. Kern. Fertilizer.

A fertilizer is prepared by atomizing or fermenting waste sulphite liquor to remove the sulphur dioxide or carbohydrates and then mixing with kieselguhr and calsium nitrate or other fertilizer ingredients. (Cf. D. R. P. 278,492, No. 29).

285. 1915. U. S. 1,147,245. H. H. Hurt. Tanning composition. Highly concentrated neutral or nearly neutral waste sulphite liquor is treated with sulphuric acid to precipitate a part of the calcium and liberate lignosulphonic acids, then sodium bisulphate is added to precipitate the remainder of the calcium and after separation of the precipitate there remains a concentrated solution of about 28-31° Bé.

286. 1915. U. S. 1,155,256. C. Marchand. Recovering by-products from the residue of wood sulphite plants (Alcohol.)

Sulphuric acid is added to the liquor to liberate and expel sulphur dioxide and the liquor is evaporated *in vacuo*, leaving only small amounts of sulphur dioxide and sulphuric acid. The remaining sulphur dioxide is oxidized to sulphuric acid by treatment with potassium permanganate, hydrogen peroxide, ozone or other oxidizing agent and the acid is neutralized with lime and after settling and decantation, the decanted liquor is fermented and distilled to obtain alcohol.

287. 1915. U. S. 1,155,708. Norwegian 26,293. J. A. DeCew. Process for preserving and hardening of wood and the like and for rendering wood and wood products fireproof.

Creosote oil or crude petroleum is emulsified with the waste sulphite liquor and the emulsion is used for impregnating wood after the addition of magnesium chloride, mercury chloride or copper sulphate.

288. 1915. U. S. 1,156,551. J. C. Pollanz. Waste sulphite liquor save-all.

The patent relates to the saving of fibers from waste sulphite liquors.

289. 1915. U. S. 1,158,366. Briquettes of ore, flue dust, etc.

Briquettes of ore, flue dust, etc., are formed with a binder produced by evaporating waste sulphite until a pitchy residue soluble in water remains, pulverizing this pitch and molding briquettes of a moistened mixture of the binder and main body materials. The molded briquettes are then treated as in U. S. 1,158,364 (No. 42.)

290. 1915. U. S. 1,165,355. D. H. Bibb. Impregnating wood.

Railroad ties or other wood is impregnated with waste sulphite liquor and then is heated to 300-350° C. for 20 minutes to render the constituents of the waste liquor insoluble.

291. 1915. British 16,315 (Nov. 19). U. S. 1,167,373 (1916). L. Berend. Solidifying emulsions. (*Cf.* No. 258.)

Solid bodies are obtained from mineral tar and other oils, hydrocarbons, tar, asphalt, bitumens, pitch, wax, resin, etc., by emulsifying them with concentrated sulphite cellulose lye and treating the resulting emulsion with burnt lime or an equivalent oxide which absorbs water to form a hydrate that is not reduced to a fluid condition by water. Loading materials, such as sawdust, wood flour, peat, cellulose, waste straw, brown coal or lignite, coke or fibrous material may be added before the addition of the burnt lime. A road surface may be faced with a composition obtained by emulsifying bitumen, adding sand and finally mixing with lime.

292. 1915. Austrian 70,653. Farbw. v. M. L. & B. Non-explosive preparations.

Sulphite cellulose lyes, or their essential constituents, or phenols or their salts are incorporated with the nitro- or di- and poly-nitro compounds, especially the di- and tri-nitrophenol salts.

293. 1915. Norwegian 25,927. Aktieselskabet Sulfitsprit. Process for obtaining organic substances from waste sulphite liquor.

The remaining liquor after the alcohol has been distilled off is mixed with sulphuric acid containing wash water from the washing of the sulphur dioxide gases and boiled at a pressure of less than twelve atmospheres.

294. 1915. Norwegian 26,028. M. Platsch. Process for puri-

[1] Papierfabricant 23, 30-33, 63-65, 89-92, 158-161, 251-253, 284-287, 293-296, 306-307. (1925).

ication of concentrated waste sulphite liquor by precipitating the lime with sulphuric acid. (*Cf.* No. 35.)

Sulphuric acid is added to the cold liquor in such quantity as to precipitate all the lime. Traces of sulphuric acid are afterward removed by the addition of a base.

295. Norwegian 26,138. J. Luke. Process for obtaining a colorless, technical lime-free tannin extract from waste sulphite liquor.

Sodium or potassium bicarbonate alone or in mixture with phosphoric acid or with ammonia and phosphoric acid is used for precipitation of the lime.

296. 1916. U. S. 1,166,509. A. B. Ayerst and C. N. Waite. Recovering alkali from wood-pulp black liquor.

The liquor is evaporated to thicken it, mixed with granular charcoal, the mixture calcined while it is agitated to keep the constituents commingled and the calcined product is leached to remove the alkali. The residual charcoal is dried and used for treating another portion of the liquor.

297. 1916. U. S. 1,173,779. L. J. Curtman. Fuel briquettes.

Finely divided coal is molded, with a binder formed of crude molasses 90%, neutralized sirupy concentrated sulphite pitch 9% and water gas tar 1%.

298. 1916. U. S. 1,175,422. W. K. Freeman. Separating the constituents of waste sulphite liquor.

Concentrated waste sulphite liquor is agitated with hydrochloric acid while hot and after boiling and cooling is treated with ammonium hydroxide to precipitate various constituents and leave a solution, from which the cellulosic derivatives may consequently be recovered for use in making brush backs, buttons, insulators, etc.

299. 1916. U. S. 1,175,423. W. K. Freeman. Treating waste sulphite liquor.

Waste sulphite liquor from wood pulp mills is heated and evaporated to concentrate it, treated with sodium chloride to assist in coagulating it and then treated with barium chloride to precipitate calcium and sulphur compounds and prepare the liquor for use as a source of cellulose compounds for use in the manufacture of billiard balls or other molded articles.

300. 1916. U. S. 1,175,425. W. K. Freeman. Cement from waste sulphite liquor.

Waste sulphite liquor is treated with sodium and barium chlorides and the remaining liquor after separation of the precipitate is evaporated to dryness and pulverized. One hundred parts of this powder is mixed with gum camphor 4, magnesium oxide 100 and magnesium chloride 50 parts, with or without silica or kaolin, forming a dry cement which is made ready for use by the addition of water. The mixture may be used for certain purposes as a substitute for celluloid, bone or ivory.

301. 1916. U. S. 1,175,426. W. K. Freeman. Cement from waste sulphite liquor.

The usual ingredients of oxychloride cement are mixed with disintegrated wood or other fillers and with the pulverized residue produced by treating waste sulphite with sodium and barium chlorides or other precipitants and evaporated without separation of the precipitate.

302. 1916. U. S. 1,175,427. W. K. Freeman. Molding oxychloride-waste sulphite liquor cement.

Disintegrated wood, corn stalks, or other fibrous material is mixed with magnesium oxide and the powdered residue produced by treating waste sulphite liquor with sodium and barium chlorides and evaporated without separation of the precipitate formed, a solution of magnesium chloride is added and the plastic mixture is molded between hot surfaces to expel excess moisture. U. S. 1,175,428 specifies a *shoe last* made of the same composition.

303. 1916. U. S. 1,175,853. J. Welsh. Sulphite liquor for repulping newspapers.

The process of removing ink, coloring matters and pigments from waste papers by the use of spent digester liquids is specified.

304. 1916. U. S. 1,178,979. J. P. Walsh. Process of binding roads and road-beds and composition therefor.

A highly hygroscopic road binder is made from a comminuted solid obtained from waste sulphite liquor and an insoluble carbonaceous filler, *e. g.*, the waste product from the manufacture of soda ash. The binder and filler are applied to the road-bed and the whole is then treated with water.

305. 1916. U. S. 1,185,604. J. Puring, Robeson Process Co. Wood stain from waste sulphite liquor.

The stain consists of an emulsion of concentrated waste sulphite-cellulose liquor, linseed oil and a little sulphuric acid, with or without the addition of formaldehyde.

306. 1916. U. S. 1,185,605. J. Puring. Dye for use on leather.

A dye for leather is formed of "liquid iron prolignite," 20; pyrogallic acid, 1; water, 10; concentrated sulphite liquor, 10-15; and linseed oil, 10-15 parts.

307. 1916. U. S. 1,188,505. N. Statham. Calcium carbonate from waste lime sludge.

Waste lime sludge obtained in recausticizing soda for soda pulp manufacture is screened with water to remove large particles of impurities, the liquor is carbonated by spraying through an atmosphere of furnace gases rich in carbon dioxide and surplus water is removed by filtration. The solid product is then dried and further carbonated by passing through a rotating kiln in the same direction that furnace gases are passed, thus minimizing overheating of the material.

308. 1916. U. S. 1,189,254. P. R. Hershman and R. D. Cooke. Production of potassium aluminate from alunite.

The alunite may be briquetted by the use of waste sulphite liquor before reduction

309. 1916. U. S. 1,196,290. E. L. Rinman. Sodium carbonate and aldehyde from black pulp-mill liquor.

Black liquor from pulp mills is subjected to dry distillation with superheated steam, after mixing with lime, to distill ketones, aldehydes, alcohols and other volatile substances and obtain a residue of sodium carbonate, calcium carbonate and carbon.

310. 1916. U. S. 1,197,983. A. H. White. Methyl alcohol and acetone from waste liquor of soda pulp manufacture.

Concentrated waste liquor from soda pulp mills is gradually fed into a retort heated to 230-390°, where it spreads out in a thin layer and is subjected to destructive distillation, with foaming and charring, forming a porous black ash. A catalyzer such as "black ash" is used within the retort and the temperature within the vapor space is maintained at about 300°, the vapor being subjected to this temperature for not more than 150 sec. Methyl alcohol and acetone are obtained in the distillate.

311. 1916. U. S. 1,203,856. J. A. DeCew. Adhesive.

A cementing material is formed by mixing waste sulphite liquor with magnesium oxide, concentrating *in vacuo* and adding magnesium chloride in molecular proportions to the magnesium oxide present, to form oxychloride.

312. 1916. British 100,596. French 481,917 (1917). E. Oman. Sulphites.

Organic matters are precipitated from sulphite lye in which the original bisulphite was either calcium, magnesium, potassium, sodium or ammonium bisulphite by adding reagents containing one or more positive ions (NH_4, Ca, Mg, K or Na) and one or more negative ions (Cl, SO_4, PO_4 and CO_3) in such relative proportions that the solution is not alkaline and eventually heating the solution either before, during or after the addition of the reagents.

(To be continued)

A. B. Andrews Approved by Joint Committee

The joint committee of the American Paper and Pulp Association, and the Technical Association of the Pulp and Paper Industry, has recently approved for listing, A. B. Andrews, of Lewiston, Maine.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Some Aspects of Wood Measurement*

By D. A. Crocker, Forester, Woodlands Section, American Paper and Pulp Association

It is not necessary for me to emphasize the desirability of uniform and better methods for the measuring of pulpwood. It is the largest single item in the cost of pulp and the most diversely and least accurately measured. The need for improvement is obvious.

Also it is not the intent of this paper to offer any solution of the problem, but rather to present, for the benefit of those of you not familiar with woods operations, some of the difficulties that will be encountered in any attempt to change methods of wood measurement in the woods. Not with the idea that no changes are possible, but rather that a thorough understanding of the difficulties on the part of all concerned may help to bring about the solution of the problem, and indicate the best point of attack.

Forms in Which Wood Is Delivered in the Pulp Mill Yard

There are three general forms in which pulpwood comes to the mill today. These are:

1. Round wood. This in turn may be divided into the three general classes of rough, sap peeled and rossed wood, according to preparation.

It may furthermore be divided according to form, as follows:

a. Two foot wood
b. Four foot wood
c. Eight foot wood
d. Logs—varying lengths over eight feet.

2. Slabs. With the increasing cost of pulpwood, slabs are again coming into use for pulpwood, and it seems probably that their use will increase as we get a better integration of the lumber and pulp industries. Highly desirable from the point of view of the conservation of our supply of wood fibre.

Slabs may be either rough, sap peeled or rossed.

Sap peeled slabs would occur only in the case of species whose bark is valuable for tanning material. Rossed slabs would be drum-barker prepared. Since slabs are a by-product of the sawmill, where cutting up machinery is easily installed, they could probably be purchased in any desired length.

3. Chips. The purchase of pulpwood in the form of chips is a new development in this country. It is a common procedure in the closely integrated pulp and lumber industries of Sweden, and will probably increase in this country. A recent example is the long time contract for a large quantity of chips between a Pacific coast pulpmill and a nearby sawmill.

In addition to the above, there are, I believe, certain possible uses of sawmill waste, which should increase in the future, but are not of major importance at present.

Methods of Measurement

In discussing methods of measurement of the various forms of pulpwood, it will perhaps be simplest to reverse the order in which they are listed above.

1. Chips. This form of pulpwood presents the ideal of measurement, for the form of the material makes weight the only practical method. It seems likely to increase, as some lumber operators in the Lake States who sell or hope to sell hemlock logs to the sulphite pulp manufacturers would prefer to deliver their product in this form. An increase in this form of pulpwood delivery is also likely in the south and on the west coast. The only problem of measurement for the pulp mill appears to be the determination of moisture content, which the technical staff can determine easily and cheaply I understand. In such cases the relation between a given volume of wood and a ton of chips must be solved by the sawmill. This may prove an extremely complicated problem for mills sawing different species and greatly varying sizes of logs, but would only interest the pulpmill accountant in the case of an integrated pulp and sawmill.

There would be chances for loss on the part of the sawmill which did not analyze its problem carefully, but these need not be discussed here.

2. Slabs. As slabs are a factory product and will probably present a fair degree of uniformity of preparation it would seem practicable to purchase them on a weight basis. In such a case the problem confronting the pulpmill would be one of remeasurement as the slabs go into the woodroom. The sawmill would again be the one to solve the relationship between volume and weight.

3. Round Wood. When we come to a discussion of the variations in the form and methods of measurement of round wood we encounter the greatest obstacles to simplified and uniform measurement, and the principal purpose of this paper is to explain to those of you not familiar with woods operations, some of the difficulties in the way of better measurement.

The particular form of round wood delivered to the pulp mill is not infrequently the one dictated by local custom, without any particular effort on the part of the management to determine whether it is actually the most desirable. I shall assume, however, that there is some logical reason for having the wood come to the mill in its present form and discuss the different forms on that basis.

a. Logs.

Originally all pulpwood was purchased in log form, usually being cut in the woods in connection with non-pulpwood species, and driven direct to the mill. This was once the common custom in the Adirondacks and New England and some instances of this are still to be found.

In the Lake States it is still the usual thing for hemlock and other

* Address delivered before the Convention of the Cost Association of the Paper Industry, held at the Statler Hotel, Buffalo, N. Y., on Friday, November 20, 1925.

pulpwood to be purchased in log form, but delivery is practically always by rail.

In newer regions, such as the Pacific Coast, where the sawmill dominates woods operations and the tree sizes are still large, logs will form the principal source of pulpwood for many years.

In eastern Canada, the cutting and delivery of pulpwood in log form seems likely to continue for some time, partly because of scaling methods on Crown Lands.

In all cases where logs are delivered to the pulpmill by water, it seems to me impossible to apply any but volume measurement to the wood before it reaches the wood yard. In cases where stumpage is purchased, I doubt the possibility of educating the stumpage owner, either private or public, to any method of volume measurement except the customary log scale. Even in regions where the pulp industry is the dominating factor in woods operations there is enough operating for lumber to make the independent land owner unwilling to complicate his methods of measurement, by the adoption of a new standard. Again, if the operating is done by a contractor, there is little chance of persuading him to accept payment on any but the accustomed basis of measurement. His experience has all been with the old established log rules, and any change in method of measurement would probably arouse his suspicion to the point of making him refuse the contract.

If, however, the logs are being cut and delivered by the mill's own logging department, an increase in scaling expense is the only obstacle to any change in form of measurement that seems more desirable. It would involve double sets of scaling records, for there must be a check on the stumpage scale, records for the paying of driving tolls on the basis of legal units, etc., but if considered worth while it could be done. I estimate an increase of fifty per cent in scaling costs, or from five to fifteen cents per cord, depending on local conditions.

If the stumpage is owned by the mill the problem would be simplified, though it would still be necessary to carry a scale in recognized legal units to report to governmental agencies and in the case of bonded timberlands, to bond holders.

Piece workers in log operations generally prefer to be paid by the piece, rather than by feet board measure, so that that factor should offer no difficulties.

This leaves the problem of weight to be solved after delivery of the logs to the mill.

If logs are purchased from lumbermen, such as the Hemlock and Hardwood operators of northern Michigan and Wisconsin, it seems probable that the seller will insist on the standard measurement in feet board measure by the particular log rule commonly used in the region. As a general rule the hemlock and other pulpwood species form less than fifty percent of the operator's total cut, and as all his other costs are on the foot board measure basis, he will not be likely to go to the extra scaling expense necessary to satisfy the purchaser desiring pulpwood measured by some new unit.

b. Eight foot pulpwood. So far as my knowledge extends, the cutting of pulpwood in eight foot lengths in the woods and its shipment to the mills in that form, is only done on a large scale in the Lake States. There it is the common custom in sections where the growth is small and the shipments are all by rail.

It has the great advantage of putting the wood into what is probably the cheapest form for loading from yards to sleds or trucks, and from these onto cars at the railroad siding. It also cheapens unloading costs at the mill and is undoubtedly an economical way of handling pulpwood of uniformly small diameter. Another advantage is the possibility of using railroad flat cars, as in the case of logs, simplifying the railroad equipment requirements.

Its greatest disadvantage, which is the excessive amount of waste left in the tree tops in the woods, does not come within the scope of this paper, but may bring about the gradual abandonment of this method of cutting because of wasteful utilization.

Eight foot pulpwood is measured by the cord of 128 stacked feet. The "double cord" is a pile of wood four feet high by eight feet long by eight feet wide. The usual unit of scale and purchase is the 128 foot cord.

In operations in this region pulpwood is seldom the only product handled, as there is usually a considerable amount of timber on the land which cannot be utilized for pulp manufacture, such as cedar, hardwoods, etc. This leads to a variety of scales and counts for production figures in the woods, and from that point of view it would not seem difficult to introduce a new volume unit for pulpwood measurement into operations run by and for the mill. Piece workers, usually being paid by the count, would offer no obstacle.

Here again, however, we meet the difficulties of complicating the records in the case of purchased stumpage.

Also, owing to the much greater number of pieces per unit of measurement, any unit based on actual wood fibre contents would lead to a much greater increase in scaling cost than in the case of long log operations. I am not willing even to guess at the costs, but think you can all understand that a volume unit based on diameter and length measurements of each stick, with wood running from 80 to 120 pieces to the cord, would be very expensive. In order to keep the cost within reasonable limits, it would be necessary to do a considerable amount of estimating and very careful men demanding good salaries, would have to be employed. Not the easiest thing to get in the woods, and a careful check would be necessary upon delivery at the mill.

Another difficulty is the fact that a large percentage of the pulpwood manufactured in this form is purchased from small operators and farmers, and will continue to be so purchased for a good many years to come. In fact, from the point of view of future pulpwood supply, it is to be hoped that there will always be a large amount of such farmed wood available.

For the purchase of such wood, I do not believe that any unit can supplant the stacked cord. It is simple and can be understood by the least educated who can maintain his own check on the scale of the purchaser. Even such a unit at times leads to disputes between buyer and seller, over the application of the scale; but in general it is a satisfactory commercial unit and seems unlikely of replacement. Certainly not by one requiring intensive measurements to determine actual wood fibre content. I, therefore, see little immediate prospect of a change in units of volume measurement in the woods, when operations are in regions where eight foot pulpwood is handled.

The possibility of buying wood on a weight basis seems even more remote.

c. Four foot pulpwood. When we come to the consideration of four foot pulpwood, we find the greatest obstacles to the introduction of any new unit of measurement into the woods, either volume, or weight. I need not repeat the difficulties as to purchased stumpage, purchased wood, etc. which apply with equal force to pulpwood in this form, but will go on to a discussion of the specific advantages of the stocked cord in the measurement of four foot wood.

For a number of years, the general tendency in the northeastern part of the United States and in eastern Canada has been to supplant long log by four foot wood operations. There are several advantages, particularly in the case of wood which is driven all or part of the way to the mill. Among these are the lessened length of sled hauls and cheaper driving, closer utilization in the woods, and the elimination of cutting up machinery in the woodroom or yard, all leading to cheaper wood.

I believe, however, that the strongest single factor in the change from logs to four foot wood has been the fact that it has greatly simplified the putting of woods operations on a piece basis. Every operator today is confronted by increasingly inefficient labor, and the greatest help in combatting this situation has been the operators' ability to get work done by the cord.

This has been facilitated by the fact that the cord is a simple unit, readily understood by woodsmen of all classes. The piece cutter can check the scale, can be made to understand necessary discounts for poorly manufactured wood, poor piling, rot, etc., and in spite of

the many arguments that arise between scaler and piece worker, the system gives pretty general satisfaction.

On the other hand, even the best class of woodmen have always been suspicious of a foot board measure scale as a basis for piece work and, from my own experience, I believe it would be an impossibility to introduce into the woods any solid content or weight unit which could be used as a basis for piece work. Four foot operating seems likely to increase in the future, except in the regions of very large timber, and to reap its full benefit the operator must use a unit of measurement easily understandable by piece workers.

In addition, the purchase of so-called farmers wood, either directly from the producer or through various pulpwood buying agencies, will continue for many years, and, perhaps increase in some regions. The farmer will sell only on a basis of measurement he can understand, and while it might be possible to educate him eventually, it would certainly be a tedious and expensive proposition, with the probability of losing desirable jobbers in a period of active demand for wood.

For these reasons as well as those previously mentioned, it seems to me that the cord is likely to continue as the standard operating and purchasing unit for four foot wood.

In parts of the South we find the variation of the 160 foot cord, wood being cut in five foot lengths. In general, such wood is handled by the same methods as four foot wood and it does not seem necessary to consider it at length.

d. Two foot pulpwood. So far as I know pulpwood is never cut into two foot lengths in the woods. When it is received at the mill in two foot lengths it usually comes from an operation where the original form has been long logs. The cutting into two foot lengths is to facilitate handling at the point where the wood is loaded onto cars or boats and generally speaking two foot wood may be considered as a minor form, due to moving the final cutting up process from the mill toward the woods operations.

It may cheapen loading costs because of its facilitating loading and unloading by machinery, particularly from boats, but has the disadvantage of usually arriving at the mill in loose form, making accurate measurement difficult if not impossible.

If four foot wood operations increase, as I anticipate, two foot wood will remain a minor item in the production and measurement of pulpwood. Better methods of measurement are, however, particularly desirable when it arrives at the mill in loose form and the application of a better volume unit or a weight unit at the cutting up point will probably be the best solution of the problem. The difficulties of such application in the woods have already been discussed in the consideration of long log operations. Like slabs, two foot wood may be considered a factory product, and it might be practicable to weigh it at the cutting up plant.

Rough, Sappeeled and Rossed Wood

I have not gone into the question of rough, sap peeled and rossed wood, since it seems to me that the real obstacles to better measurement of pulpwood are those of form rather than of preparation. These variations in preparation before delivery to the mill emphasize the desirability of better methods of measurement, but do not affect materially the possibilities of improvement.

I have tried to present some of the difficulties which it seems to me will be encountered in putting the measurement of pulpwood on a uniform and accurate basis in the woods. Improvements can be made, but it seems to me that the line of attack should be somewhat as follows:

First, I do not believe that there will ever be any possibility of weight measurements outside of the wood room, except for chips and slabs and possibly two foot wood at the cutting up plant. In these places, it seems to me it is possible and the principal question is one of expense.

Second, I do believe that it is possible to agree upon a satisfactory volume unit, such as the "Cunit" and to apply this as a supplementary method of measurement, as far toward the stump as is desired. The governing factor would be expense. Then the technical staff can have a reasonably constant volume measurement to convert to weight if actual weighing is not practicable.

If the mills can reach an agreement upon any volume unit, it should first be thoroughly tried out in the wood yard in scaling the wood as received. This would gradually lead to the acquiring of a body of information which would aid the installation of such supplementary measurements in the woods. It then becomes a question of expense, but I warn you that it cannot be done too cheaply if the results are to be of any real value. Careless application of any unit of volume measurement may give as great variations in pulp production per unit as are found at present. Don't change unless you are prepared to do it thoroughly.

Successful Forestry Conference at Syracuse

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 21, 1925.—According to announcement made here the recent demonstration and wood utilization conference held at the New York State College of Forestry, Syracuse University, from November 10 to 13 was most successful, and was attended by numerous pulp and paper manufacturers and representatives of organizations interested in woods products.

The first two days were given over to a demonstration of the most economical and the best methods of operating small sawmill plants and managing woodlots, the operation and handling of the plant, the way to obtain maximum output at minimum cost, the scientific management of small timber properties and the marketing of timber and lumber.

November 12, the last day of the conference, was devoted to the New York State Utilization Conference in which the following participated: American Paper and Pulp Association, Hammermill Paper Company, United States Department of Commerce, United States Forest Service, New York State Builders' Exchange, Southern Pine Association, American Forest Products Association, New York Lumber Trade Association, American Wood Preservers Association, Association of Wood-Using Industries, American Tree Association. The speaking program included several prominent pulp and paper mill men.

The conference was held under the auspices of the Empire State Products Association and the New York State College of Forestry. The Syracuse meeting was a continuation by New York State of part of the work started last winter at Washington at the National Wood Utilization Conference and was in recognition of the importance of conserving our wood supply by a more economical use of wood.

Pulp and paper manufacturers and other manufacturers of forest products are realizing more than ever that much of the constructive work of reforestation and forest protection will be counteracted by waste unless better methods in lumbering and manufacturing are put into practice, it was brought out at the conference. Waste prevention is the quickest and most direct way of reducing the severity of the impending wood famine. This was emphasized by several speakers. It is planned through the co-operation of the many interests represented at the conference to make a forward step along these lines.

Manufacture of Paper in Holyoke

HOLYOKE, Mass., November 23.—A recent statistical report gives some interesting figures on the manufacture of paper in Holyoke. For 1924 the industry in the 21 mills here employed 3819 people, paid wages to the amount of $4,466,251 and produced paper to the value of $21,501,678. The same figures for the years 1919 to 1924 follow:

Year	Stock	Wages Paid	Employes
1919	$21,375,894	$4,043,999	3,628
1920	42,594,937	6,548,027	4,675
1921	14,415,924	3,369,280	3,948
1922	21,329,420	4,170,439	4,066
1923	21,464,342	4,837,753	3,654
1924	21,501,678	4,466,251	3,819

Jacob Kindleberger Honored by Employes

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., November 23, 1925.—Parchment's most colorful fete and joyfest was held November 13, when all hands turned out to help celebrate in honor of Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company. It was Jake's night, at which the head of the great institution and Mrs. Kindleberger were made guests of honor at a banquet planned and financed by the employes.

It was the second event of this kind held at Parchment, the first one occurring November 23, 1923, on which occasion the head of the institution was also the guest.

The real significance of Friday night's outburst of enthusiasm lies in the fact that it celebrates several months successful operation of the machine in Mill 2 and the termination of a long period of troubles, worries and vexatious delays that have worn the entire organization nearly to a frazzle.

The slogan, "We are over the top, Let's carry on," conveys in a line the nature of the outburst of enthusiasm. Frank Richardson, toastmaster at Friday night's supper program, remarked in addressing the guest of honor, "Any manager can get into a hole. It takes a mighty good one to get out," conveyed the confidence in Mr. Kindleberger of his fellow workers and their real satisfaction that Parchment operative difficulties have been ironed out and mastered.

"Jake's Night," as it will go down in history, was staged by the employes of the big boss, a wholly spontaneous affair. The first intimation of the event came when Mr. Kindleberger found on his desk an attractively bound blue morocco volume, suitably inscribed and carrying the personal signature of everyone of the 800 employes of the big plant, also this announcement:

"Mr. and Mrs. Kindleberger:—In appreciation of your successful leadership and personal interest your fellow employes invite you to be guests of honor on Friday night, November 13, 1925. We will call for you at your home at 5:00 p. m. We are over the top. Let's carry on."

This book, Mr. Kindleberger declares is the choicest volume in his possession "with the exception of the one and the greatest book of all."

For two or three weeks everybody has been on tip toe getting ready for this event. The greatest good natured rivalry has developed among every department in the organization. As a result, when the procession formed Friday evening to march to the Community House, where the supper and program was held, the outpouring exceeded the wildest dreams of the human imagination. The procession was over a mile long and from end to end a mad revel of color and novelty effects.

Mr. and Mrs. Kindleberger and a few invited guests were at the Community house to view the pageant as it passed in review. "Just to think that they have done all this and, at the same time, established a two weeks' production record for the company," said Mr. Kindleberger.

Everybody who could possibly be spared, had turned out for the event. Harry Sebring had arranged seating capacity for 638 in the Community house basement. Every chair was taken. While this crowd ate, sang, and whiled away the happy hours, 150 faithful workers stuck to their posts in the mills and kept the night shift production schedule at 100 per cent.

Don McDowell pepped up the crowd with a community song and then Frank Richardson rapped for order and called special attention to the significance of this occasion. "We are two years older as a group," he said. "Let us hope we are two years older in understanding." He pledged Mr. Kindleberger the loyal support and backing of every man and woman in the Kalamazoo plant.

Then came a highly original and interesting program arranged by the various departments. The Bosker Sisters from the main office rendered a duet. A group of girls from the parchment division sang a hymn in the Holland language. They were dressed in the customs of the Netherlands. There were greetings from the sorting room of No. 1 Mill by Mrs. Cora Stafford. and from machine and beater rooms of No. 1 by Leonard Abraham. Mrs. Myrtle Reynolds from bond room No. 1, read a poem written by Francis Southon. Oscar Byers spoke for Glendale and Archie Hays for beater room of Mill No. 2. Lester Smith represented bond room in Mill 2, and Robert Smith the wax production and finishing departments. A chorus of girls from bond room No. 2 sang.

Other features were: Wax Department, Ray White, poem; Mr. and Mrs. Fred Mercer, violin and piano duet; Shipping, Leo Boylan, greetings, and Ed. Edleman, Central Machine Shop, saxaphone solo; Central Shop Machinist, Roy Cronk, greetings; Power Department, Louis Snooks, and Edward Williams, talks; Printing Department, Albert Drake, greetings. William Peck spoke for the office, saying, "you can't find this kind of leadership built up around any corporation, it is a matter of leadership and sacred relationship between the employes of this company."

R. H. Hayward, general manager of the K. V. P., said that every department during the past two months has established records as to production and quality.

W. J. Lawrence, president of the Western Paper Makers Chemical Company, said: "This gathering will add ten years to Mr. Kindleberger's life.

W. L. Brownell, advertising writer for the K. V. P., said the biggest and best things in life are friends and friendships.

Mr. Kindleberger was sensibly affected when he arose amid salvos of applause to talk to his people. "I have a book that is the choicest volume in my possession, with the exception of the one and greatest book of all," said Mr. Kindleberger. "In this book are your names, which I shall always prize. There are things in this world better than barrels of gold. Thank God, I have had the sense to accept the better part."

He urged the continuance of the wonderful spirit of loyalty everywhere evident in the plant, adding: "As long as we work together, we need not be afraid of competition. If the company wins, you win, for we will win or lose together."

A hymn by the Parchment quartette and benediction by the Rev. Mr. Walker closed the program.

United Paperboard Has Best Year Since 1923

From present indications, says the *Wall Street News*, the United Paperboard Company will enjoy the best year since 1923 with present earnings running materially higher for the first five months of the present fiscal year, which ends May 31, 1926, than in the corresponding months of 1924 and 1923. A dividend of ½ per cent on the common was declared on July 1, the first payment since 1921. According to circles closely in touch with company affairs, the common may shortly be placed on a regular quarterly dividend basis with $1.50 the basis prominently figuring in the discussion. Directors of the company have been hesitant in making such a distribution, even in the face of good earnings, owing to the conditions in this particular industry, which often cause wide fluctuations in earnings from month to month. For this reason it is impossible accurately to forecast annual earnings till near the close of the twelve-month period.

In the year ended May 31 last, each of Paperboard's sixteen mills showed an increased average daily production of several points in each instance. Coupled with this all mills but one showed smaller fuel consumption, which in some cases was quite substantial. Encouraged by the economies effected in the fuel line, company officials are now devoting attention to reducing operating costs from the raw material standpoint. A new device has been completed whereby the 15 per cent waste in pulp manufacture will be lowered to around 7 per cent.

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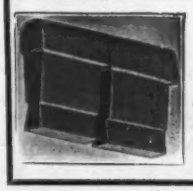

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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 21, 1925

SUMMARY

News print .....533 bls., 84 rolls
Cigarette paper .....94 cs.
Wall paper .....81 bls., 7 cs.
Paper hangings .....62 bls.
Printing paper .....28 rolls, 56 bls., 108 cs.
Wrapping paper .....39 rolls, 63 bls.
Packing paper .....13 cs.
Surface coated paper .....244 cs.
Baryta coated paper .....73 cs.
Decalcomania paper .....18 cs.
Tracing paper .....38 cs.
Filter paper .....4 cs.
Drawing paper .....14 cs.
Tissue paper .....33 cs.
Writing paper .....28 cs.
Envelopes .....40 cs.
Straw board .....203 rolls
Colored paper .....22 cs.
Fancy paper .....6 cs.
Metal paper .....16 cs.
Crepe paper .....4 cs.
Wax paper .....1 cs.
Flintstone paper .....33 bls.
Note paper and Envelopes .....93 pgks.
Stationery .....6 cs.
Miscellaneous paper .....10 cs.

CIGARETTE PAPER

The Surbrug Co., Schodack, Havre, 22 cs.
Standard Products Corp., Schodack, Havre, 58 cs.
Max Spiegel & Sons, Chicago, Bordeaux, 14 cs.

WALL PAPER

A. C. Dodman, Jr., Inc., Zeeland, Antwerp, 13 bls.
F. J. Emmerich & Co., A. Ballin, Hamburg, 14 bls.
W. H. S. Lloyd & Co., Franconia, Liverpool, 10 bls.
Bendix Paper Co., M. Leonhardt, Hamburg, 3 cs.
A. C. Dodman, Jr., Inc., Mauretania, Southampton, 44 bls.
A. C. Dodman, Jr., Inc., Mauretania, Southampton, 4 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Franconia, Liverpool, 28 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 34 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 5 cs.

NEWS PRINT

Norwegian Paper Mills Agency, Inc., H. Olav, Oslo, 533 bls.
W. Hartman & Co., Inc., Rotterdam, Rotterdam, 84 rolls.

PRINTING PAPER

Titan Shipping Co., Berengaria, Havre, 10 cs.
P. C. Zuhlke, Zeeland, Antwerp, 3 cs.
Keuffel & Esser, A. Ballin, Hamburg, 28 rolls.
Oxford University Press, Baltic, Liverpool, 5 cs.
B. F. Drakenfeld & Co., Franconia, Liverpool, 31 cs.
Globe Shipping Co., Breedyk, Rotterdam, 10 cs.
Japan Paper Co., Breedyk, Rotterdam, 8 bls.
Japan Paper Co., American Shipper, London, 2 cs.
Martin & Bechtold, America, Bremen, 21 cs.
R. Wilson Paper Corp., Incemore, Dundee, 40 bls.
Titan Shipping Co., Mauretania, Havre, 8 cs.
Japan Paper Co., Rotterdam, Rotterdam, 8 bls.
Perkins, Goodwin & Co., Belgenland, Antwerp, 18 cs.

WRAPPING PAPER

F. C. Strype, Zeeland, Antwerp, 39 rolls.
Wilkinson Bros. & Co., Inc., Belgenland, Antwerp, 63 bls.

PACKING PAPER

International Forwarding Co., A. Ballin, Hamburg, 10 cs.
S. Gilbert, Breedyk, Rotterdam, 3 cs.

WRITING PAPER

Maurice O'Meara Co., Pr. Wilson, Trieste, 25 bls.
J. W. Hampton, Jr., & Co., Berengaria, Havre, 1 cs.
B. Altman & Co., Belgenland, Antwerp, 2 cs.

FANCY PAPER

Whiting & Patterson Co., Berengaria, Southampton, 6 cs.

COLORED PAPER

C. W. Williams & Co., Zeeland, Antwerp, 1 cs.
S. Langedorf & Co., A. Ballin, Hamburg, 7 cs.
Phoenix Shipping Co., Pr. Roosevelt, Bremen, 4 cs.
H. D. Catty & Co., Belgenland, Antwerp, 3 cs.
C. W. Williams & Co., Belgenland, Antwerp, 7 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Zeeland, Antwerp, 30 cs.
Gevaert Co. of America, Zeeland, Antwerp, 137 cs.
P. C. Zuhlke, Belgenland, Antwerp, 77 cs.

BARYTA COATED PAPER

Globe Shipping Co., Berlin, Bremen, 73 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, A. Ballin, Hamburg, 16 cs.

DECALCOMANIA PAPER

C. W. Sellers, Republic, Bremen, 10 cs.
Phoenix Shipping Co., Republic, Bremen, 6 cs.
C. W. Sellers, Pr. Roosevelt, Bremen, 2 cs.

TISSUE PAPER

Old Master Pulp & Paper Co., A. Ballin, Hamburg, 2 cs.
Brooks Paper Co., Franconia, Liverpool, 1 cs.
Standard Products Corp., Schodack, Havre, 30 cs.

TRACING PAPER

Keuffel & Esser, A. Ballin, Hamburg, 11 cs.
Globe Shipping Co., Berlin, Bremen, 27 cs.

DRAWING PAPER

Keuffel & Esser, A. Ballin, Hamburg, 14 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 2 cs.
Scientific Materials Co., Minnetonka, London, 1 cs.
Eaton, Dikeman & Co., Amer. Shipper, London, 1 cs.

CREPE PAPER

S. Hanfling & Co., A. Ballin, Hamburg, 4 cs.

WAX PAPER

Gevaert Co. of America, Zeeland, Antwerp, 1 cs.

NOTE PAPER AND ENVELOPES

Independent Forwarding Co., Franconia, Liverpool, 93 pgs.

ENVELOPES

Globe Shipping Co., Berlin, Bremen, 40 cs.

STATIONERY

De La Rue & Co., Minnetonka, London, 6 cs.

FLINTSTONE PAPER

United Hardware & Tool Co., America, Bremen, 33 bls.

STRAW BOARD

A. Vuyck, Rotterdam, Rotterdam, 203 rolls.

PAPER

E. Steiger & Co., Republic, Bremen, 2 cs.
F. L. Kramer & Co., Minnetonka, London, 5 cs.
Steffens, Jones & Co., Rotterdam, Rotterdam, 3 cs.

RAGS, BAGGINGS, ETC.

A. W. Fenton, Inc., Eastern Victor, Antwerp, 221 bls. rags.
Darmstadt, Scott & Courtney, Eastern Victor, Antwerp, 119 bls. bagging.
H. J. Kane, Coelleda, Manchester, 19 bls. picker waste.
Kidder-Peabody Accep. Corp., Coelleda, Manchester, 27 bls. picker waste.
A. W. Fenton, Inc., Coelleda, Manchester, 94 bls. rags.
E. J. Keller Co., Inc., Republic, Bremen, 379 bls. bagging.
E. J. Keller Co., Inc., Amasis, Algiers, 80 bls. rags.
Brown Bros. & Co., Amasis, Alexandria, 81 bls. rags.
Amsinck, Sonne & Co., Inc., Amasis, Alexandria, 137 bls. rags.
Brown Bros. & Co., Transylvania, Glasgow, 40 bls. rags.
Whaling Waste Products Co., A. Ballin, Hamburg, 111 bls. jute card waste.
E. J. Keller Co., Inc., A. Ballin, Hamburg, 82 bls. bagging.
E. J. Keller Co., Inc., A. Ballin, Hamburg, 260 bls. rags.
Chemical National Bank, A. Ballin, Hamburg, 57 bls. rags.
Irving Bank-Columbia Trust Co., Baltic, Liverpool, 34 bls. bagging.
National City Bank, Handicap, Barcelona, 239 bls. rags.
S. Birkenstein & Sons, Handicap, Barcelona, 45 bls. bagging.
J. M. Jaffe, Handicap, Marseilles, 76 bls. rags.
The Barret Co., Handicap, Marseilles, 71 bls. rags.
National City Bank, Handicap, Leghorn, 251 bls. rags.
Anglo-South American Trust Co., Handicap, Leghorn, 402 bls. rags.
A. W. Fenton, Inc., Handicap, Leghorn, 65 bls. rags.
A. W. Fenton, Inc., Handicap, Leghorn, 35 bls. bagging.
A. W. Fenton, Inc., Handicap, Genoa, 61 bls. rags.
Castle & Overton, Inc., Handicap, Genoa, 125 bls. bagging.
Anglo-South American Trust Co., Minnetonka, London, 27 bls rags.
G. M. Graves Co., Breedyk, Rotterdam, 54 bls. rags.
Mechanics & Metals National Bank, Breedyk, Rotterdam, 201 bls. rags.
W. Von Doorn, Breedyk, Rotterdam, 46 bls. rags.
A. W. Fenton, Inc., Amer. Shipper, London, 20 bls. rags.
L. H. Abenheimer, America, Bremen, 95 bls. bagging.
A. H. Searle, Vardulia, London, 166 bls. rags.
Castle & Overton, Inc., Bremen, Bremen, 22 bls. rags.
French-American Banking Corp., Schodack, Dunkirk, 100 bls. rags.
R. Bishop Manfg. Co., Schodack, Dunkirk, 168 bls. rags.
Metzger & Co., Schodack, Havre, 32 bls. rags.
A. W. Fenton, Inc., Schodack, Havre, 97 bls. rags.
L. H. Abenheimer, Schodack, Havre, 61 bls. rags.
Union National Bank, H. Olav, Copenhagen, 111 bls. bagging.
E. J. Keller Co., Inc., H. Olav, Copenhagen, 215 bls. rags.
I. Abela & Co., Clara C., Malta, 80 bls. rags.
Hudson Forwarding Co., Clara C., Venice, 100 bls. bagging.
Brown Bros. & Co., Clara C., Trieste, 86 bls. rags.
Anglo-South American Trust Co., Clara C., Trieste, 102 bls. rags.
A. W. Fenton, Inc., Balsam, Cardiff, 550 bls. rags.
E. J. Keller Co., Inc., Anaconda, Rotterdam, 39 bls. rags.
G. W. Millar & Co., Anaconda, Rotterdam, 401 bls. bagging.
A. W. Fenton, Inc., Anaconda, Rotterdam, 154 bls. rags.
A. W. Fenton, Inc., Incemore, Leith, 54 bls. rags.
D. M. Hicks, Incemore, Leith, 7 bls. rags.
Brown Bros. & Co., Incemore, Belfast, 13 bls. rags.
M. Snedeker, Incemore, Belfast, 80 bls. paper stock.
A. W. Fenton, Inc., M. Leonhardt, Hamburg, 124 bls. rags.
A. W. Fenton, Inc., Pr. Roosevelt, Bremen, 90 bls. rags.
The Stone Bros. Co., Inc., Pr. Roosevelt, Bremen, 180 bls. rags.
J. Meyer, Pr. Roosevelt, Bremen, 29 bls. canvas.
Brown Bros. & Co., Isonzo II, Genoa, 17 bls. rags.

OLD ROPE

N. E. Berzen, Handicap, Barcelona, 114 coils.
E. J. Keller Co., Inc., H. Olav, Copenhagen, 387 coils.

Imports of Paper and Paper Stock

G. M. Graves Co., Anaconda, Rotterdam, 35 bales.
Marx Maier Papermill Supply Co., Anaconda, Rotterdam, 33 bales.
E. J. Keller Co., Inc., Rotterdam, Rotterdam, 71 coils.
E. J. Keller Co., Inc., Francisco, Newcastle, 184 coils.
New York Trust Co., Francisco, Newcastle, 102 coils.
Brown Bros. & Co., Francisco, Hull, 180 coils.

MANILA ROPE

Ellermans' Wilson Line, Minnetonka, London, 90 coils.

WOOD PULP

M. Gottesman & Co., Inc., Breedyk, Rotterdam, 600 bls. wood pulp.
E. M. Sergeant & Co., H. Olav, Oslo, 75 bls. chemical pulp.
Castle & Overton, Inc., Anaconda, Rotterdam, 276 bls. wood pulp.
W. Hartman & Co., Inc., M. Leonhardt, Hamburg, 700 bls. wood pulp, 105 tons.
Buck, Kiaer & Co., Inc., Bergensfjord, Oslo, 200 bls. sulphate pulp, 25 tons.

WOOD FLOUR

The Bakelite Corp., Anaconda, Rotterdam, 862 bags, 62,565 kilos.
Castle & Overton, Inc., Anaconda, Rotterdam, 1021 bags, 50,520 kilos.
A. Kramer & Co., Rotterdam, Rotterdam, 400 bags, ———.

CHINA CLAY

J. W. Higman & Co., Inc., India Maru, Fowey, 40 casks, 20 tons.
J. W. Higman & Co., Inc., India Maru, Fowey, 93 tons, 7 cwt. bulk.
Atlantic National Bank of Boston, India Maru, Fowey, 2040 tons, 7 cwt. bulk.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 21, 1925

E. J. Keller Co., Inc., West Campgaw, Hamburg, 530 bls. rags.
J. B. Moors & Co., May. Maru, Osaka, 250 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 21, 1925

The Congoleum Co., Schodack, Dunkirk, 92 bls. rags.
S. Shapiro & Sons, Schodack, Dunkirk, 29 bls. rags.
E. J. Keller Co., Inc., Westerner, Rotterdam, 116 bls. bagging.
Caste & Overton, Inc., Juf. Maru, Hamburg, 1000 bls. wood pulp, 200 tons.
Buck, Kiaer & Co., Inc., Dania, Copenhagen, 1200 bls. sulphite, 200 tons.
Buck, Kiaer & Co., Inc., Dania, Oslo, 400 bls. sulphate, 50 tons.

CHARLESTON IMPORTS

WEEK ENDING NOVEMBER 21, 1925

Castle & Overton, Inc., Coldwater, Antwerp, 80 bls. bagging.
E. J. Keller Co., Inc., Coldwater, Antwerp, 147 bls. bagging.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 21, 1925

C. Kurz & Co., Eastern Victor, Antwerp, 3 cs. paper.
F. Weber & Co., Handicap, Genoa, 3 cs. paper.
Salomon Bros. & Co., Handicap, Marseilles, 43 bls. rags.
The Stone Bros. Co., Inc., Handicap, Marseilles, 157 bls. rags.
S. Birkenstein Sons, Handicap, Marseilles, 35 coils old rope.
E. J. Keller Co., Inc., Handicap, Marseilles, 96 bls. rags.
S. Birkenstein Sons, Handicap, Marseilles, 118 bls. rags.
S. Birkenstein Sons, Handicap, Marseilles, 30 bls. new cuttings.
Reis & Co., Eastern Victor, Rotterdam, 94 bls. thread waste.
The Stone Bros. Co., Inc., Eastern Victor, Rotterdam, 45 bls. rags.
S. Shapiro Sons, Eastern Victor, Rotterdam, 64 bls. rags.
New England Waste Co., Eastern Victor, Rotterdam, 37 b's. cotton waste.
Castle & Overton, Inc., Eastern Victor, Antwerp, 337 bls. rags.
A. W. Fenton, Inc., Eastern Victor, Antwerp, 212 bls. rags.
National Bank of Commerce, Eastern Victor, Antwerp, 64 bls. rags.
A. Hurst & Co., Eastern Victor, Antwerp, 42 bls. rags.
M. Friedman & Co., Eastern Victor, Antwerp, 28 bls. rags.
L. H. Abenheimer, Eastern Victor, Antwerp, 442 bls. rags.
Union National Bank, Incemore, Leith, 25 bls.
A. W. Fenton, Inc., Incemore, Leith, 125 bls. rags.
J. A. Steer & Co., Incemore, Leith, 70 bls. rags.
D. I. Murphy, M. Leonhardt, Hamburg, 65 bls. rags.
Baltimore Trust Co., M. Leonhardt, Hamburg, 264 bls. rags.
S. Birkenstein Sons, M. Leonhardt, Hamburg, 60 bls. rags.
Castle & Overton, West Eldara, Rotterdam, 47 bls. rags.
Castle & Overton, Juf. Maru, Hamburg, 83 bls. rags.
Castle & Overton, Inc., Legie, Hamburg, 596 bls. rags.
Castle & Overton, Inc., London Exchange, London, 58 bls. rags.
E. J. Keller Co., Inc., Clara C., Trieste, 97 bls. rags.
E. J. Keller Co., Inc., Napierian, Antwerp, 100 bls. rags.
E. J. Keller Co., Inc., A. F. Luckenbach, Shanghai, 915 bls. rags.
E. J. Keller Co., Inc., Dania, Copenhagen, 401 bls. rags.
E. J. Keller Co., Inc., West Eldara, Rotterdam, 37 bls. rags.
J. B. Moors & Co., India Maru, Fowey, 272 tons, 8 cwt. china clay.
Atlantic National Bank of Boston, India Maru, Fowey, 1973 tons, 12 cwt. china clay.
Papermakers Importing Co., India Maru, Fowey, 1269 tons, 9 cwt. china clay.
Morey & Co., Inc., India Maru, Fowey, 92 tons, 9 cwt. china clay.
J. W. Higman & Co., Inc., India Maru, Fowey, 410 tons, 9 cwt. china clay.
Papermakers Importing Co., India Maru, Fowey, 40 casks, 20 tons china clay.
Castle & Overton, Inc., M. Leonhardt, Hamburg, 560 bls. wood pulp, 112 tons.
Buck, Kiaer & Co., Inc., Topeka, Oslo, 1600 bls. sulphate, 200 tons.
Buck, Kiaer & Co., Inc., Nordfarer, Umea, 7000 bls. sulphate, 1000 tons.

SAN FRANCISCO IMPORTS

WEEK ENDING NOVEMBER 21, 1925

First National Bank, May. Maru, Osaka, 90 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 21, 1925

Frazar & Co., May. Maru, Kobe, 450 bls. rags.
Frazar & Co., May. Maru, Yokohama, 250 bls. rags.
Castle & Overton, Inc., West Erral, France, 376 bls. rags.
E. J. Keller Co., Inc., Aquarius, Bremen, 34 bls. bagging.
E. J. Keller Co., Inc., Gand, Havre, 24 bls. bagging.

Czechoslovakia Paper Mills Buy

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—In Czechoslovakia, pulp and paper mills were well employed on both domestic and foreign orders up to the middle of October, according to a report from Consul General C. S. Winans, Prague. Production has recently been reported to have increased 25 per cent, the industry ··· the province of Slovakia having almost attained pre-war capacity.

The United States is now considered one of the most important outlets for Czechoslovak wood pulp, closely following Italy and Germany in the amount of its purchases. Prices up to the middle of October showed little change over those of the preceding in pulp wood prices it is not thought likely that pulp and paper prices will be advanced in the near future.

month, and notwithstanding that there has been a recent increase

Quotations on kraft paper decreased 6 cents and on kraft pulp from 6 to 12 cents per 100 pounds during the period. Prices ruling up to October 15 were as follows: Newsprint $3.83 to $4.16; kraft paper $5.91 to $6.04; kraft pulp $4.03 to $4.30; chemical pulp, bleached $4.03 to $4.10; unbleached Ia $2.95 to $3.16; unbleached Ib $2.69; mechanical pulp bleached $3.83 to $4.70; unbleached $2.69 to $2.89; all prices including the 2 per cent turnover tax.

According to a statement by the chief of the Russian Soviet Commercial Mission located in Prague 2 approximately $2,072,000 worth of paper was purchased for the Russian account during the month of September.

Exports of Pulpwood Increase

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—Exports of pulp wood during the first 9 months of 1925 amounted to 1,305,280 cubic meters valued at approximately $4,846,000, according to a report from Assistant Trade Commissioner Emil Kekich, Helsingfors. This amount represents practically a three-fold increase over shipments during the preceding 12 months. The great advance in general consumption was due chiefly to larger buying on the part of Germany and the Netherlands, although practically all consuming countries with the exception of Norway took an increased amount during the current year.

The principal purchasers of Finnish pulpwood during the first nine months of 1925 in the order of their importance were: the Netherlands, 482,661 cubic meters, Germany, 480,621 cubic meters, France, 104,000 cubic meters, Great Britain, 85,000 cubic meters, Norway, 51,000 cubic meters and Sweden, 31,000 cubic meters. While the Netherlands apparently ranks first as a consumer of Finnish wood it is believed that a large part of these shipments eventually reach Germany.

Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

TWO-TEXT—No. 215,758. Standard Paper Manufacturing Company, Richmond, Va. For white or colored bond writing paper coated on one side in white or colors.

ART-POINT—No. 217,410. Charles R. Myers, Sebastopol, Cal. For printed stationery.

HOSPI-UTILITY—No. 219,168. Continental Paper and Bag Mills Corporation, New York. For prophylactic tissue paper.

ENSEMBLE—No. 219,196. Old Colony Envelope Company, Westfield, Mass. For greeting and announcement cards.

FOUR STATES PARCHMENT—No. 219,025. Bennett Printing Company, Paris, Texas. For writing and printing paper and bank-check paper.

WHITE PORCELAIN ENAMEL SHELF PAPER—No. 216,447. The Appleton Coated Paper Company, Appleton, Wis. For white shelf paper surface coated one side with china clay and calendered to give it a glossy finish.

Deny Report That They Will Build Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., November 23, 1925.—The purchase of over 200,000 acres of land, representing an outlay of over $2,000,000 has just been perfected by W. J. Lawrence of Kalamazoo and C. K. Williams and C. H. Knight of Easton, Pa. This will be followed by the establishment of the largest rosin and turpentine production plant in the world and the perfection of plans for reforestation, outstripping any efforts as yet undertaken by any American corporation or municipality.

Messrs Lawrence, Williams and Knight are directly interested in the Western Paper Makers Chemical Company of Kalamazoo and Canada and other allied concerns in Milwaukee, Wis., Easton, Pa. and Indiana. The land acquired by them is located in Echols and Clinch counties, Georgia. Thes southern baseline of the property extends from the Suwanee river westward for 25 miles along the Florida state line and has an average width of 15 miles north and south, or an area of 375 miles all told. This land is covered with a heavy growth of the finest yellow pine, with some cypress.

The area purchased includes eight towns, six of which have been acquired outright and two will be directly under the control of the new owners. Through one side of the property runs the Southern Railroad and on the other side the Atlantic Coast Line railroad. Messrs. Lawrence, Knight and Williams have started the construction of a railroad line 30 miles in length, connecting the two trunk systems mentioned. They now have two locomotives in operation, while a third one has been ordered from the Baldwin Locomotive Works and will be ready for delivery January 1, 1926.

"We purchased this land solely for the development of our propetual output of 400 barrels of rosin and 175 barrels of turpentine said Mr. Lawrence. The area is well timbered for our needs and through our proposed reforestation scheme will insure us a perpetpal output of 400 barrels of rosin and 175 barrels of turpentine daily. When one considers that the average rosin still turns out only 200 barrels of rosin annually, it gives some idea of the extent of our proposed operations. We will have ten stills on this property, all of which will be in operation in a short time. Two hundred men are now working and the number of employees will be in excess of 500 in a few months.

"In addition to rosin and turpentine production, the presence of a large amount of cypress makes it profitable for us to establish a large saw mill, getting out lumber and ties. We expect to handle regularly an average of 10 cars of freight when once under way.

"We now have plants at Jacksonville and Pensacola, Florida and Savannah, Ga. Distilled rosin is sent to those points, but at times we find the raw stock has been subjected to faulty distillation and it is to get way from that condition that formed one of the reasons for our recent purchase. Certain qualifications are required in rosin for the proper sizing of paper. That is the grade we are aiming to secure and at all times in sufficient quantities to insure a stable market.

"This development is solely for the production of rosin and turpentine. Reports to the effect that we plan to erect a pulp and paper mill in the South are without foundation."

Binder Board Sold in 718 Sizes in 1924

WASHINGTJN, D. C., November 23, 1925.—The Department of Simplified Practice Division of the Department of Commerce will address a meeting of binder board manufacturers in New York on November 24.

Mr. Gately has just finished compiling figures as a result of a questionnaire sent out by him to the manufacturers. The summary of his tabulation follows:

The accompanying survey shows that binder board during 1924 was sold in 718 different sizes; that these sizes varied from each other by as little as ¼ inch, and that each size was made in from 1 to 27 different thicknesses. Thus there was a total of 1928 different items in varying amounts handled. Of these 1928 items 945 of them represented individual lots of less than 100 bundles each, the total representing less than 7 per cent of the entire sales for the year. 790 items were sold in lots of from 100 to 1,000 bundles each and only 193 items were in sufficient demand to run the individual totals over 1,000 bundles each. In only 17 cases do the annual sales represent more than 1 per cent of the grand total for the year, viz:

20" x 30"		24" x 56"	
20	1.46%	10	1.15%
25	1.38%	26" x 32"	
30	1.20%	22	1.27%
20" x 36"		25	4.80%
15	1.10%	27	1.49%
22" x 28"		26" x 38"	
15	1.25%	15	1.48%
25	1.72%	20	1.65%
30	1.50%	25	1.21%
22" x 37"		27" x 29"	
22	1.00%	25	1.05%
24" x 36"			
25	1.26%		

From this it is obvious that the industry is burdening itself with an unnecessarily excessive variety, and thereby cutting down its service to the public and profits to itself by reason of the excessive costs of manufacture, storage and distribution which the handling of this variety involves.

News Print Carload Shipment Decision

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1925.—Carload shipments of news print, printing, and wrapping paper from certain points in Michigan, Mississippi, New York, Ohio, Pennsylvania, and Wisconsin to Dallas, Texas, have not been shown to have been overcharged, according to the decision just rendered by the Interstate Commerce Commission and the complaint has been dismissed. This was the case of the Texas Farm and Ranch Publishing Company against the Director General of Railways.

FISCHER for Results!

Our two-color printer is the last word in paper bag development, and can be applied to any "Fischer Machine." Bag manufacturers who want quantity as well as quality should investigate the FISCHER ALL ROTARY FLAT AND SQUARE BAG MACHINE.

Simplicity in design—built as accurately as human skill can produce a machine for this purpose, and speed in production you have always hoped for.

Users consider the Fischer the best on the market.
Let us quote you on your requirements of flat and square, as well as satchel bottom machines for making 1/16, ⅛ and ¼ barrel sizes.

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310-316 North Eleventh St, Philadelphia Pa.

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856

For reliable running and average long life

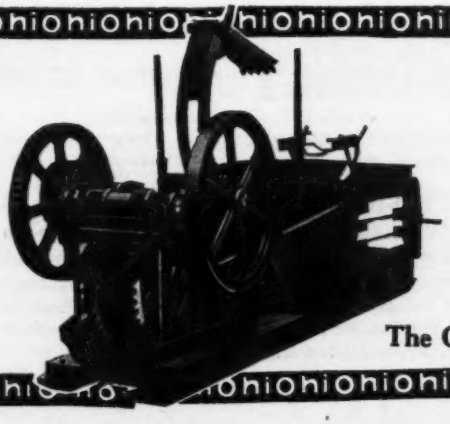
LINDSAY FOURDRINIER WIRES

are unsurpassed

We make them for the largest and fastest machines

Cylinder Wires All Sizes

The Lindsay Wire Weaving Co.
Collinwood Sta. CLEVELAND, OHIO



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BALING PRESS

Used by many of the leading paper products manufacturers in United States and Canada.
Ask us for the list of users.

The OHIO CULTIVATOR CO., Bellevue, Ohio

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 25, 1925.

Reports in local paper circles last week indicated that there has been no lessening of the seasonal demand for news print and various commodities that compose the market. Manufacturers report a continuous large consumption of newsprint by metropolitan and suburban dailies. There is little likelihood, it is said, of any change except for the better until the busy holiday season with its attendant advertising, gives way to the comparatively duller months. Even then business will continue along the same brisk lines, it is felt, well into summer.

Stocks of news print, according to reports, continue to remain low in the fact of an increasing quantity of contract business; so that even more orders, it is believed, will be filled by the leading manufacturers before the boom in business reaches its peak. The same scarcity of stocks is true in most instances of other market products. Increased contract withdrawals are anticipated consequently. The demand for Kraft paper and Manila is still good.

Mechanical Pulp

Spot trading in the ground wood market continues fair, it is reported, while according to the leading dealers and manufacturers there is a slightly larger volume of contract business being done, as buyers seem to be reaching the bottom of their supplies. Mechanical pulp still remains scarce from the standpoint of both the buyer and the manufacturer. Prices, it is felt, are on the point of rising. The scarcity of mechanical pulp is expected to contine for some time.

Chemical Pulp

Kraft pulp and sulphite are also scarce, there being no increase of supplies to be looked for from sweden, this country has already sold a majority of her year's supplies and has not yet, as far as it is known, manufactured the equivalent again. Shipments of this material are rather few and far between. The manufacturers are being pressed into rapid production in order to meet a good demand for chemical pulp.

Old Rope and Bagging

The tone of the market for foreign and domestic bagging continued strong last week. Offerings were reported to be as scarce as they have been for the last month, while there has also been no change in the good demand experienced for this commodity. The inclination of the market toward a higher level still holds true, it is said. There is still a good demand for old rope, prices remaining stable.

Rags

The consumption of foreign rags in the countries where they are manufactured continues heavy. There is a good demand by the home consumer in America for rags and prices here are cheaper than they are abroad.

Waste Paper

Lower grades of waste paper are in less demand than usual, the preference for the better grades, as evinced recently by buyers, still obtaining. The easing off of the lower grades, however, has been so slight that there have been no material alterations in prices. Prices on all grades in the meanwhile are being well maintained. The market for old kraft paper, is said to be especially good now.

Twine

Christmas shoppers continue to keep the department store clerks busy wrapping and tying packages. As a result the manufacturers of twine have enjoyed a busy pre-holiday season, which if indications are correct, will continue for some little time after New Year.

Coloring of High Grade Blottings

Blotting papers of the better grades are generally manufactured from cotton fiber containing varying small amounts of either bleached soda or sulfite pulp. The use of groundwood is objectionable, impairing not only the appearance of the finished paper but its absorbent qualities as well. The first and chief requirement of blottings is as high an absorbing factor as possible, and then fastness to light.

Regarding the actual manufacture of blottings, the maker is particularly interested in preparing a pulp that has a high affinity for dyestuffs, so as to yield a clear back water, and in the cases of heavy shades, to cause as little discoloration of the machine felts as possible. These requirements are principally met by making use of the substantive or direct dyes, which are represented by the National's well known line of Erie or Niagara Dyes.

In actual paper mill practice, the pulp is colored in the beater. The dye is first dissolved in hot water, then added to the beater, and as soon thereafter a sufficient quantity of common salt or Glauber's salt to fix the color. The temperature of the beater is maintained at about 120° F., until a trial sample shows full absorption of the dye with a clear back water. The amount of dye to be used depends upon the desired shade, but the amount of salt varies from 100 to 200 pounds for each 1,000 pounds of dry paper.

For the production of bright shades, the beater man may add certain basic dyes to the beater. If this is done, this addition is best made immediately after the salt has been run in.

The following recipes from practice will prove of interest to manufacturers of high grade blottings.

Light Blue on 1,000 lbs. of pulp	
National Niagara Sky Blue 6BP	5 lbs.
Common Salt	100 lbs.
Medium Green on 1,000 lbs. of pulp	
National Erie Green GP	14 lbs.
National Erie Yellow 2RFP	35 lbs.
National Victoria Green ABP Crystals	2 lbs.
Common Salt	200 lbs.
Red on 1,000 lbs. of pulp	
National Erie Benzo 4BP	16¼ lbs.
Common Salt	150 lbs.
Gray on 1,000 lbs. of pulp	
National Erie Elack B Extra	4 lbs.
Common Salt	100 lbs.

Cigarette Tissue Paper Drawback Allowed

WASHINGTON, D. C., November 25 ,1925.—The Treasury Department has announced the allowance of drawback on cigarette tissue paper cut to specific sizes for use in machines produced by the Boucher Cork Company of New York for the account of the Standard Products Company, of New York, with the use of imported tissue paper in wide rolls.

HIGH GRADE COATING AND FILLER CLAYS

REPRESENTING
ENGLISH CHINA CLAYS, LTD.
ST. AUSTELL, ENGLAND

ECCO CLAYS
TRADE MARK

LARGEST
CHINA CLAY PRODUCERS
IN THE WORLD.

ENGLISH CHINA CLAYS SALES CORPORATION
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"EASTCO"
BLEACHED SULPHITE

Using "Eastco" Bleached Sulphite ourselves, testing it day by day, in producing our line of "Eastco" Fine Writing Papers, we have complete control—because we have complete knowledge—of its quality, uniformity and adaptability to the requirements of the paper maker.

EASTCO E

"Eastco" Bleached Sulphite is good pulp; it makes good paper. Furnished in Bales, Rolls or Laps as required. Write for Samples and Prices.

EASTERN MANUFACTURING COMPANY
292 MADISON AVENUE - NEW YORK CITY

TABER PUMPS

Fig. 510 illustrates Taber SL Double Suction Centrifugal Pump.

TABER PUMP COMPANY
BUFFALO, N. Y.

A. J. BRADLEY MFG. COMPANY
Oiled Stencil Board

Lamp Shade Parchment
IN A VARIETY OF GRADES AND COLORS
101 BEEKMAN STREET NEW YORK

GENERAL Aluminum Sulphate CHEMICAL

GENERAL CHEMICAL COMPANY 40 RECTOR STREET, NEW YORK

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RAGS, NEW CUTTINGS,
WIPERS, ROPE, BAGGING, ETC.

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Executive Offices:	*Representatives:*	
Widener Bldg.	New York	Chicago
Philadelphia, Pa.	Pittsburgh	St. Louis

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J. O. Ross Engineering Corp.
30 E. 42nd St.
CHICAGO NEW YORK CITY BOSTON

VAPOR ABSORPTION SYSTEMS

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 25, 1925.

Business in the chemical market continued on a satisfactory basis last week, general conditions remaining the same, and undertones being firm. Inquiries about orders were received by the principal manufacturers, but no great increase in contract business was reported. Spot trading continued at a brisk rate.

BLANC FIXE—No particular change marked the steady tone of the blanc fixe market. The tendency to shade prices, reported the week before, is said to be decreasing, now that buyers' stocks are believed to be lower than they have been for some time. Spot business is as good as usual. The pulp is still quoted at from $60 to $70 a ton and from $55 to $60 a ton in bulk, at works. Powder sells for $75 to $90 a ton, and from $80 to $85, in less than car load lots.

BLEACHING POWDER—The bleaching powder market continues firm, a considerable volume of contract business having been closed at the quoted levels for 1926. It is reported at all sources that demand for this material is better than it was a month before. Prices are still ranging from $2.00 to $2.40 per hundred pounds in large drums, at works.

CAUSTIC SODA—Contract withdrawals of caustic soda, which have been especially heavy this month, continue to move at a record pace. Considering the season, consumers are taking on supplies in large volume, it is said. An even larger tonnage of orders is expected to be on the manufacturers' lists by the end of the year. Spot trading is still good, prices prevailing from $3.10 to $3.15 per hundred pounds, at works.

CASEIN—The demand for casein is normal for the time of year, there being no startling market developments. Dealers and manufacturers are transacting a moderate amount of business. Domestic casein still sells at 13 to 14 cents a pound. Foreign grades are only fractionally higher, the price being 13.50 to 14.75 cents a pound.

CHINA CLAY—Congestion of freight traffic in the south attributed to an embargo in Florida, still means that buyers are turning to England for their supplies of China Clay, it is reported. Otherwise there is no change in the market. Foreign grades are still quoted at the same price, despite the situation in the south—$14.50 to $22.50 a ton. Domestic clay sells for $12 to $15 for the same quantity.

CHLORINE—There is no let up in the popularity of chlorine in the chemical market. Large volume of contract withdrawals are still reported, and spot business continues at its usual good pace. Inquiries about contract business are being received and orders dispatched in large quantities. Orders are being placed at 4 cents a pound in tanks or multi-unit cars at works. The price for spot sales is still quoted at 4½ cents a pound.

ROSIN—The market for rosin is still firm, the bulk of the demand continuing to be for the low and medium grades. The demand from abroad is still good. Paper maker grades are quoted at the naval stores at from $15.55 to $15.60 in barrels of 280 pounds, ship side.

SALT CAKE—Prices for salt cake have been well maintained, the general tone of the market being firm. Spot business is good and contract sales fair. The prevailing price is quoted at from $17 to $20 a ton in bulk, at works.

SODA ASH—Manufacturers of soda ash responded to a particularly large number of contract orders last week. Indications, it is said, point to an even larger business of this kind before the present year is closed. Prices show a firm tendency. Spot trading is reported comparatively small. Prices range from 1.26 to 1.63 cents a pound in bulk at works.

STARCH—The tendency of the starch market remains the same as for preceding weeks, low prices obtaining and brisk business being done in spot trading and contract orders. Special paper starch is quoted at $3.32 per hundred pounds, in bags and barrels.

SULPHATE OF ALUMINA—Shipments of sulphate of alumina continue to be stimulated by the paper industry's demand for this material. Spot business continues along favorable lines, prices being quoted at from $1.40 to $1.50 per 100 pounds for commercial grades and from $2.00 to $2.30 for the iron free, in the same amount.

SULPHUR—Increased firmness in the market for sulphur is reported this week. Prices remain at from $19 to $20 a ton, in bulk, ship side, and from $15 to $16 a ton at mine.

TALC—Talc is maintaining a normal tone, there being no changes reported on prices. This product is being quoted at from $17 to $18 a ton, according to grade.

Paper Dish Organizations Combine

TOLEDO, Ohio, November 21, 1925.—The Champion-No-Leak Paper Dish Company has been formed by the consolidation of The Champion Paper Dish Company of Toledo, The No-Leak Paper Dish Company of Wheeling, and The Southwestern Broom Company of Evansville. The main offices of the company are at Toledo, Ohio. Factories and warehouses will be maintained at all three points.

The officers are: Riley Sweers, President; Geo. A. Vradenburg, 1st Vice Pres.; E. T. Maxwell, 2nd Vice Pres.; Alfred A. Klein, 3rd Vice Pres.; C. W. Reade, Secy. Treas.; H. A. Middleton, Asst. Secy.; H. E. Maxwell, Sales Manager.

The new company will manufacture and sell all the brands of butter dishes formerly made by them individually, Champion single and double manila lined, No-Leak and Utility. Straight and mixed cars or local shipments of any or all brands will be shipped from the warehouse nearest to destination F.O.B. Prices are the same on delivery from any one of the three distribution points.

The new company was formed to give jobbers a one-day delivery into practically any market, to save the wholesaler excessive transportation costs, to enable him to buy mixed cars at any one of three points, and to effect great economies in buying, manufacturing, selling, and delivering these popular butter dish lines, says Riley Sweers.

All three organizations remain intact and come bodily into the new company. The four lines, No-Leak, Utility, Universal and Champion will be made as heretofore and in the same way by the same people. All will concert in a constant effort to give the trade a better product, better delivery, and better service under much more stable market conditions.

New Paper Warehouse for Appleton

A building permit was obtained from the building inspection department of the city of Appleton last week by the Kimberly-Clark Company, of Neenah, for the construction of a new two-story warehouse at its Atlas paper mill on South Jackman street, in Appleton.

Contract for the construction work was awarded to the C. R. Meyer and Sons Company, of Oshkosh. The building will be erected of brick, reenforced concrete and steel. The dimensions are 95.10 by 53 by 30 feet, and the estimated cost is $25,000.

William C. Wing, Neenah, president of the Fox River Paper Company, Appleton, and E. A. Peterson, president of the Valley Iron Works, also of Appleton, have returned home from a three months' visit in Europe.

Box Board Production for September

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 23, 1925.—The Department of Commerce announces September figures on the operations of box-board manufacturers, based on reports of 89 firms operating 111 plants. The capacity data in the following table vary according to the normal number of working days in each month, Saturdays, Sundays and holidays being excluded, since the five-day week was adopted by about 80 per cent of the mills.

DRYER FELTS

STANDARD and MULTIPLE PLY

ENGLISH WEAVE

In Two, Three, Four, Five and Six Ply, 60 inches to 176 inches in width.

BY ACTUAL TEST this felt will dry 33 per cent more paper, with ABSOLUTELY NO FELT MARKS IN THE PAPER.

TRIUNE

THREE PLY FELT for other paper

FITCHBURG DUCK MILLS

FITCHBURG . MASSACHUSETTS

MANUFACTURERS OF FINE PAPERS

wishing NEW ENGLAND or BOSTON representation are invited to communicate with the

CHAS. A. ESTY PAPER CO.

136 FEDERAL ST.—BOSTON, MASS.

who are prepared on or about January 1, 1926 to warehouse and distribute in Boston a few distinctive lines through high grade merchandising.

Daily Capacity of 600 Air-Dry Tons

The extent of our production of

High Grade

BLEACHED

Sulphite Fibre

insures uniform quality, prompt shipments and market prices

BROWN COMPANY

founded 1852

PORTLAND MAINE

Mills at Berlin, New Hampshire

NEW YORK CITY Woolworth Bldg.

CHICAGO 110 So. Dearborn St.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Some portion of our clay production is *pulverized.* That part of it which is *pulverized* is, as far as we know, the only *pulverized clay* which is washed and refined before being pulverized. This insures greater freedom from impurities and an exceedingly uniform product.

Prices on M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit samples and quote you

THE

MINER-EDGAR CO.

110 William St., NEW YORK

Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Poyer and Paper, Gen. 6s 1940	100	102
Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	102
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Compas.y Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	103
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	98	101
Eddy Paper, 7½s 1931	100	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1945	95	100
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100*
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	100	...
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	99	101
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¼
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	96	99
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	95
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	98	...
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	88	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	67	70
Abitibi Power and Paper, Pfd	103	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	4	6
Beaver Board, Pfd	34	37
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Com	49	54
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, Pfd	85	...
International Paper Co., Com	55	60
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com	60	65
Mengel Company, Pfd	83	93
Oxford Papers, Com	102	...
Oxford Paper Co., Pfd	100	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	47	50
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	83	85
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	97	101
Spanish River Pulp and Paper, Pfd	109	...
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	...	47
West Virginia Pulp and Paper, Pfd	95	105
Whittaker Paper, Com	50	...
Whittaker Paper, Pfd	60	70

* Nominal.

Paper
(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, contract, '26	3.25	@ 3.65
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.80	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.50	@ 7.00
No. 2 Domestic	5.75	@ 6.20
Southern	5.75	@ 6.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
S. Screening	3.00	@ 3.50
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mia. Ll. Chip	58.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp
(Ex-Dock)

No. 1 Imported—		
Moist	35.00	@40.00
Dry	38.00	@42.00
(F. o. b. Mill)		
No. 1 Domestic	28.00	@32.00

Chemical Pulp
(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	3.25	@ 3.60
No. 1 strong unbleached	2.95	@ 3.25
No. 2 strong unbleached	2.80	@ 2.95
No. 1 Kraft	3.00	@ 3.25
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	4.00	@ 4.75
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.75	@ 2.90
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	3.00	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags
New Rags
Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.25	@15.00
New White, No. 2	8.00	@10.00
Silesias No. 1	9.75	@10.50
New Unbleached	14.00	@14.62½
Washables	8.00	@ 8.25
Fancy	9.25	@ 9.75
Blue Overall	11.50	@11.75
New Blue Prints	7.25	@ 7.75
New Soft Blacks	5.75	@ 6.00
Mixed Khaki Cuttings	6.75	@ 7.25
Pink Corset Cuttings	11.25	@11.75
Pink Muslin	10.00	@10.50
New Light Seconds	3.50	@ 3.75
O. D. Khaki Cuttings	7.00	@ 7.50
Men's Corduroy	5.75	@ 6.25
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.75	@ 7.25
Miscellaneous	6.25	@ 6.75
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.75
St. Soiled, White	2.90	@ 3.00
Thirds and Blues—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.25
Black Stockings	3.75	@ 4.25
Roofing Rags—		
Cloth (Strippings)	2.30	@ 2.40
No. 1	2.30	@ 2.40
No. 2	1.90	@ 2.00
No. 3	1.50	@ 1.60
No. 4	1.60	@ 1.70
No. 5A	1.15	@ 1.25

Foreign Rags

New Light Silesias	9.50	@10.00
Light Flannelettes	10.50	@11.00
Unbleached Cottons	14.00	@14.50
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@10.50
New Light Prints	9.00	@ 9.50
New Mixed Cuttings	4.25	@ 4.50
New Dark Cuttings	4.00	@ 4.25
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.50
Ord. Light Prints	3.25	@ 3.75
Med. Light Prints	2.50	@ 3.00
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	2.75	@ 3.00
Ger. Blue Linens	4.00	@ 4.25
Checks and Blues	3.25	@ 3.50
Linsay Garments	2.20	@ 2.35
Dark Cottons	2.10	@ 2.20
Shoppery	2.00	@ 2.10
French Blues	3.75	@ 4.25

Bagging
Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.60	@ 4.00
Domestic	3.75	@ 4.00
Wool Tares, light	2.85	@ 3.00
Wool, Tares, heavy	2.90	@ 3.10
Bright, Bagging	2.75	@ 2.90
Mixed Bagging	2.40	@ 2.50
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.75	@ 1.80
Small Mixed Rope	2.25	@ 2.50
Manila Rope—		
Foreign	5.50	@ 5.75
Domestic	6.50	@ 7.00
New Bu. Cut	4.00	@ 4.25
Hessian Jute Threads—		
Foreign	4.50	@ 5.00
Domestic	4.25	@ 4.75

Old Waste Papers
(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.60	@ 3.80
Hard, White, No. 2	3.20	@ 3.40
Soft, White, No. 1	3.00	@ 3.25
Flat Stock—		
Stitchless	1.30	@ 1.40
Overissue Mag	1.30	@ 1.40
Solid Flat Book	1.20	@ 1.30
Crumpled No. 1	.85	@ .95
Solid Book Ledger	1.90	@ 2.00
Ledger Stock	1.50	@ 1.60
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.25	@ 2.40
New Cut No. 1	1.65	@ 2.00
Extra No. 1 old	1.20	@ 1.90
Print	.75	@ .85
Container Board	.65	@ .75
Bogus Wrapper	.75	@ .85
Old Krafts Machine compressed bales	2.35	@ 2.50
News—		
No. 1 White News	2.00	@ 2.10
Strictly Overissue	.75	@ .85
Strictly Folded	.67½	@ .75
No. 1 Mixed Paper	.50	@ .55
Common Paper	.50	@ .75

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .45
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C. 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.36	@ .38

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Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

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THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

THE GEORGE M. GRAVES CO., Inc.
Domestic and Foreign

WASTE PAPER — NEW CUTTINGS — HEMP ROPE
OLD RAGS — MANILA ROPE — FLAX WASTE
WOOD PULP — BAGGING — COTTON WASTE

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MENASHA, WISCONSIN

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Designing Pumps to Fit All Conditions Our Specialty

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All Grades of Rag and Paper Stock
200 FIFTH AVENUE, NEW YORK
COTTON WASTE :: LINTERS :: RAMIE

Finished Jute—			
Dark, 18 basis...	.30	@	.31
Light, 18 basis..	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.22	@	.24
No. 2	.20½	@	.22½
Tube Rope—			
4-ply and larger..	.16	@	.19
[illegible] Yarn—			
4-ply and larger..	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India-			
Basis	.15½	@	.16½
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.20	@	.40
Ameri. Hemp, 6...	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis.....	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.20	@	.21

CHICAGO

Paper

F. o. b. Mill

All Rag Bond....	35	@	40
No. 1 Rag Bond...	25	@	35
No. 2 Rag Bond...	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond.....	7	@	10¼
Sulphite Ledger....	9	@	12
Superfine Writing..	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book.	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¼
Coated Book.....	7½	@	10
Coated Label.....	7½	@	10
News—Roll, mill...	3¼	@	4¼
News—Sheets, mill	3¼	@	4½
No. 1 Manila.....	4½	@	5½
No. 1 Fibre.....	4½	@	5
No. 2 Manila.....	4	@	4½
Butchers' Manila..	3¼	@	4¼
No. 1 Kraft.....	6	@	6½
No. 2 Kraft (Northern Grade).....	5	@	5¼
Kraft (Southern Grade)	4¼	@	5
Wood Tag Boards.	4¼	@	6¼
Sulphite Screenings	3	@	3¼
Manila Tissue, 24x36 sheet	7¼	@	7¾
White Tissue, 20x30 sheet	7¼	@	7½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip 45.00		@	47.50
Solid News.....47.50		@	50.00
Manila Line Chip.57.50		@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.25	@	3.50
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.90	@	3.10
No. 1 Mixed....	1.45	@	1.50
No. 2 Mixed....	1.15	@	1.20
Ledger and Writings	1.55	@	1.60
Solid Books	1.45	@	1.50
No. 1 Light Books	1.00	@	1.05
Blanks	2.00	@	2.10
Kraft	2.45	@	2.50
New Kraft Cuts.	2.70	@	2.80
Manila Envelope Cuttings	2.50	@	2.60
Ex. No. 1 Manila..	2.25	@	2.35
Print Manila	1.05	@	1.10
Folded News (oversize)	.90	@	.95
Old Newspapers—			
No. 1	.80	@	.85
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.75	@	.80
No. 2	.55	@	.60
Straw Clippings....	.75	@	.80
Binders' Clippings..	.75	@	.80
Roofing Stocks, f. o. b. Chicago, Net Cash—			
No. 1.....47.00		@	52.00
No. 2.....45.00		@	50.00
No. 3 .....43.00		@	48.00
No. 4.....41.00		@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content.....	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho.....	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.11	@	.12
Manila, Sul. No. 1.	.05	@	.05
Manila, Sul. No. 2.	.03¾	@	.04¼
No. 1 Kraft.....	.05¾	@	.06½
No. 2 Kraft.....	.05½	@	.05¾
Common Bogus....	.02½	@	.02¾
Straw Board	—	@	50.00
News Board	—	@	47.50
Chip Board	—	@	45.00
Single Manila Pulp lined board 57.50		@	60.00
Single White, patent coated board 75.00		@	82.50
Wood Pulp Board..80.00		@	85.00
Binder Boards.....75.00		@	85.00
Tarred Felts—			
Regular 61.00		@	63.00
Slaters 66.00		@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
White Black News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White..	.02¾	@	.03
No. 2 Soft White..	.02½	@	.03
No. 1 Mixed.....	1.60	@	1.75
No. 2 Mixed.....	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila.	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	2.35
Overissue News ...	1.00	@	1.10
Old Newspapers ...	.70	@	.85
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip..	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.37½
Domestic	—	@	3.50
Manila Rope	—	@	5.50
Mixed Rope	2.00	@	—
Scrap burlaps	—	@	2.37½
Wool Tares, heavy.	2.50	@	2.75
Mixed Strings....	—	@	1.90
New Burlap Cutting	—	@	3.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1...	.11	@	—
New Unbleached.	.14¼	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls.....	12½	@	—
New Black, soft...	.07	@	—
Khaki Cuttings.....	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1 .....10.00		@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous.....	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous ...	3.50	@	—
Roofing Stock—			
No. 1	2.15	@	—
No. 2	1.90	@	—
No. 3	1.75	@	—
No. 4	1.90	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2.....	.16	@	.25
Fine, No. 3.....	.12	@	.20
Book, M. F.....	.06¾	@	.07
Book, S. S. & C...	.06	@	.07½
Book, Coated	.11	@	.16
Coated—Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila.	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2.....	.04	@	.04½
No. 2 Kraft.....	.05¼	@	.05½
No. 1 Kraft.....	.06¼	@	.06½
Common Bogus	.02¾	@	—
Straw Board 56.00		@	55.00
News Board 45.00		@	—
Chip Board 47.50		@	—
Wood Pulp Board. 4.50		@	5.00
(Carload Lots)			
Binder Boards—			
Per ton 75.00		@	80.00
Carload lots 65.00		@	70.00
Tarred Felts—			
Regular 66.00		&	68.00
Slaters 70.00		@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply.	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags—New

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06	@	.08
Silesias, No. 1...	.10½	@	.11
New Unbleached.	.14	@	.14½
Washable	.07¾	@	.07¾
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.12
New Blue.....	.04	@	.04¼
New Black Soft..	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings..	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps....	2.25	@	2.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings....	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.25	@	3.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed....	1.50	@	1.60
No. 2 Mixed....	1.00	@	1.10
Solid Ledger Stock.	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light.	1.20	@	1.25
No. 1 New Manila.	1.80	@	2.00
No. 1 Old Manila..	1.60	@	1.75
Print Manila.....	1.25	@	1.35
Container Manila..	1.00	@	1.10
Old Kraft	2.00	@	2.10
Common Paper....	.50	@	.60
Straw Board, Chip.	.60	@	.65
Binders Bd., Chip..	.60	@	.65
Over issue News...	.85	@	1.00
Old Newspaper....	.70	@	.75
Old White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous ...	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous ...	2.75	@	3.00
Black Stockings.	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite).	—	@	.13
Ledgers No. 1.....	.36	@	—
Ledgers No. 2.....	.27	@	—
Writing	.09½	@	
Writing S. C.....	.10	@	
News f. o. b. Mills—			
Rolls (carloads)..	3.50	@	—
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.....	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood 30.00		@	32.50
Sulphite easy bleaching 60.00		@	65.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate 62.50		@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut..3.65		@	—
Soft White Book shavings	—	@	3.15
White Blk. News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers ...	1.40	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas..	1.10	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News ...	.90	@	—
No. 1 Mixed Papers	.70	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto		Per lb.	
No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¼	@	.10
No. 1 Old Whites..	—	@	—
Third and blues...	—		—